# केंद्रीय विद्यालय संगठन क्षेत्रीय कार्यालय रायपुर

**Kendriya Vidyalaya** Sangathan Regional Office Raipur



## **GEOGRAPHY**



Class - XII

**Question Bank Term- II 2021-22** 

# केंद्रीय विद्यालय संगठन क्षेत्रीय कार्यालय रायपुर

## Kendriya Vidyalaya Sangathan Regional Office Raipur

# MESSAGE FROM DUPUTY COMMISSIONER



It gives me immense pleasure to bring out the study material for 2<sup>nd</sup> Term in different subject of Classes X and XII for Raipur Region. All of us know that in the 1<sup>st</sup> Term Examination questions were objective but in 2<sup>nd</sup> Term questions will be subjective so once again to get our children acquainted and familiarized with the new scheme of examination and types of questions, it is of utmost significance that an extensive study material should be provided to our children. This question bank is in complete consonance with CBSE Circular Number 51 and 53 issued in the month of July 2021. It will help students to prepare themselves better for the examination. Sound and deeper knowledge of the Units and Chapters is must for grasping the concepts, understanding the questions. Study materials help in making suitable and effective notes for quick revision just before the examination.

Due to the unprecedented circumstances of COVID-19 pandemic the students and the teachers are getting very limited opportunity to interact face to face in the classes. In such a situation the supervised and especially prepared value points will help the students to develop their understanding and analytical skills together. The students will be benefitted immensely after going through the question bank and practice papers. The study materials will build a special bond and act as connecting link between the teachers and the students as both can undertake a guided and experiential learning simultaneously. It will help the students develop the habit of exploring and analyzing the Creative & Critical Thinking Skills. The new concepts introduced in the question pattern related to case study, reasoning and ascertain will empower the students to take independent decision on different situational problems. The different study materials are designed in such a manner to help the students in their self-learning pace. It emphasizes the great pedagogical dictum that 'everything can be learnt but nothing can be taught'. The self-motivated learning as well as supervised classes will together help them achieve the new academic heights.

I would like to extend my sincere gratitude to all the principals and the teachers who have relentlessly striven for completion of the project of preparing study materials for all the subjects. Their enormous contribution in making this project successful is praiseworthy.

Happy learning and best of luck!

Vinod Kumar (Deputy Commissioner)

# केंद्रीय विद्यालय संगठन क्षेत्रीय कार्यालय रायपुर

Kendriya Vidyalaya Sangathan Regional Office Raipur

## **Our Patorn**



Vinod Kumar Deputy Commissioner KVS RO Raipur



Smt. Biraja Mishra Assistant Commissioner KVS RO Raipur



Smt. Prabha Minj Principal Kendriya Vidyalaya No.2 Raipur

# भारत का संविधान उद्देशिका

हम, भारत के लोग, भारत को एक संपूर्ण प्रभुत्व-संपन्न, समाजवादी, पंथ-निरपेक्ष, लोकतंत्रात्मक गणराज्य बनाने के लिए तथा उसके समस्त नागरिकों को:

> सामाजिक, आर्थिक और राजनैतिक न्याय, विचार, अभिव्यक्ति, विश्वास, धर्म और उपासना की स्वतंत्रता, प्रतिष्ठा और अवसर की समता प्राप्त कराने के लिए, तथा उन सब में व्यक्ति की गरिमा और राष्ट्र की एकता और अखंडता स्निश्चित करने वाली बंधुता बढ़ाने के लिए

दृढ्संकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवंबर, 1949 ई. (मिति मार्गशीर्ष शुक्ला सप्तमी, संवत् दो हजार छह विक्रमी) को एतद्द्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।

## **CONTENT TEAM**

- Vandana Sahu ,PGT Geography KV No-1 Raipur Shift-II
- Abhay Vishwakarma, PGT Geography KV Kanker
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# GEOGRAPHY (CODE NO.29) CLASS -XII

Sr.	Unit	Chapter	Book	Content/chapter	Page Number	Page
No.		Number		1	(English Version)	Number (Hindi
					version)	Version)
1	Unit III	6	Book -I	Secondary Activities	9-22	143-161
2		7		Tertiary and Quaternary Activities	23-34	162-171
3	Unit IV	8		Transport and Communication	35-62	172-215
4	Unit III	7	Book-II	Mineral and Energy Resources	63-87	216-244
5		9		Planning in India	88-109	245-270
6	Unit IV	10		Transport and Communication	110-129	271-293
7	Unit V	12		Geographical Perspective on selected issues and problems	130-142	294-312

## **COURSE CONTENT TERM II**

Weightage: 35

		ghtage:
Part A:	Fundamentals of Human Geography	15 Marks
Unit III:	Human Activities	9
	Secondary activities-concept; manufacturing: types - household, small scale, large scale; agro based and mineral based industries; people engaged in secondary activities - some examples from selected countries	
	Tertiary activities-concept; trade, transport and tourism; services; people engaged in tertiary activities - some examples from selected countries	
	Quaternary activities-concept; people engaged in quaternary activities – case study from selected countries	
Unit IV:	Transport and Communication	6
	Land transport - roads, railways; trans-continental railways Water transport - inland waterways; major ocean routes Air transport - Intercontinental air routes Oil and gas pipelines Satellite communication and cyberspace - importance and usage for geographical information; use of GPS	
Part B:	India: People and Economy	15 Marks
Unit III:	Resources and Development	7
	Mineral and energy resources - distribution of metallic (Iron ore, Copper, Bauxite, Manganese); non-metallic (Mica, Salt) minerals; conventional (Coal, Petroleum, Natural gas and Hydroelectricity) and non-conventional energy sources (solar, wind, biogas) and conservation  Planning in India - target group area planning (case study); idea of sustainable development (case study)	
Unit IV:	Transport and Communication Transport and communication-roads, railways, waterways and airways: oil and gas pipelines; Geographical information and communication networks.	4

Unit V:	Geographical Perspective on selected issues and problems  Environmental pollution; urban-waste disposal Urbanization, rural- urban migration; problems of slums Land degradation	4
Map v	work on locating and labelling of features based on above units on outline map of India.	5
Part C:	Practical Work	15 Marks
Unit 1:	Processing of Data and Thematic Mapping  Representation of data- construction of diagrams: Lines, bars, circles and flowchart; thematic maps; construction of dot; choropleth and isopleth maps  Data analysis and generation of diagrams, graphs and other visual diagrams using computers	

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### **Prescribed Books:**

- 1. Fundamentals of Human Geography, Class XII, Published by NCERT
- 2. India People and Economy, Class XII, Published by NCERT
- 3. Practical Work in Geography, Part II Class XII, Published by NCERT

### **India- People and Economy**

#### Class XII-Textbook II

### (NCERT)

### Map Items for locating and labelling only on the outline political map of India

Units - 1 Ch. 1 to 4 & 2

- State with highest level of urbanization and lowest level of urbanization
- State with higher level of population density & one state with lowest level of population density
- One out migrating state
- One in migrating state
- Any city with more than 10 million population Greater Mumbai, Delhi, Kolkata, Chennai, Bengaluru

Unit - 3 Ch. 6 to 9

#### **Mines:**

- Iron-ore mines: Mayurbhanj, Bailadila, Ratnagiri, Bellary
- Manganese mines: Balaghat, Shimoga
- Copper mines: Hazaribagh, Singhbhum, Khetri
- Bauxite mines: Katni, Bilaspur and Koraput
- Coal mines: Jharia, Bokaro, Raniganj, Neyveli
- Oil Refineries: Mathura, Jamnagar, Baroni Industries

Unit - 9 Ch. 10 Tra

Transport:

(i) Important nodes on north south corridor, east west corridor & Golden Quadrilateral

Unit-10 Ch.12

NIL

## **Secondary Activities**

#### **Manufacturing**

The literally meaning of manufacturing is to make by hand, but in the present context, the manufacturing means the conversion of raw material into more useful and valuable fabricated articles with the help of machines.

### **Manufacturing Industries**

These are geographically located manufacturing units that transform raw materials into finished goods of higher value for sale in local or distant markets. The term industry is comprehensive and can also be used in many secondary activities which are not carried on in factories like entertainment industry, tourism industry, etc.

The manufacturing industries are characterised by the following:

- **Specialisation of Skills:-** In industries, one task is done repeatedly that gives specialisation of doing that task. This involves high cost of manufacturing. On the other hand, mass production involves production of large quantity of standardised parts by each worker performing only one task repeatedly.
- **Mechanisation**:-The industries use automated processes or machines which does the major production. Human thinking is not required in mechanisation.
- **Technological Innovation**:- Latest technology is used and constant innovation is done to eliminate waste, quality control, combat pollution and bring efficiency.
- Organisational Structure and Stratification: -Modern manufacturing is characterised by complex machine technology, extreme specialisation, division of labour, vast capital, large organisations and executive bureaucracy.
- Uneven Geographic Distribution:- The industries are concentrated in regions that are rich in mineral and other resources. These areas cover less than 10% of the world's land area. These regions have become the major centres of economic and political power.

#### **Location of industry**

The location of industry at a particular place is governed by a large number of geographical and non-geographical factors. Industries maximise profits by reducing costs. Thus, industries should be located at points where the production costs are minimum.

Following factors influence the location of industry at particular places:

- Access to Market Areas that provide large markets for finished industrial goods like developed areas of Europe, America, Japan, Australia, South Asia have huge concentration of industries.
- Access to Sources of Energy Coal, petroleum and hydroelectricity are main sources of energy. Industries using more power are located close to these sources.
- Access to Raw Material Industries based on cheap, bulky and weight-losing materials (ores) like steel, sugar are based close to sources of raw materials. Similarly, processing of dairy products, perishable foods and agro based are done near the sources of raw materials.

- Access to Labour Supply Industries are located where there is availability of skilled labour. Some types of manufacturing still require skilled labour.
- Access to Source of Energy Industries which use more power are located nearer to the source of energy supply such as iron and steel industries. Energy is most essential to run machines in industries. The main power resources are coal, petroleum, hydroelectricity, natural gas and nuclear energy.
- Access to Transportation and Communication Facilities Industries are located in places that have efficient transportation facilities and communication services for the exchange and management of information.
- Access to Agglomeration Economies Agglomeration economies refer to the benefits derived from the linkages that exist between different industries. The small industries or ancillary units like to operate near leader industries to benefit from nearness to big or basic industries.
- **Government Policy** For the balanced economic development, governments promote various regions by setting up industries in a particular link between industrial areas.

#### **Classification of Manufacturing Industries**

Industries are classified on the basis of their size, inputs/ raw materials, output/ products and ownership.

#### **Industries Based on Size**

Based on amount of capital invested, a number of workers employed and volume of production, industries are classified into the following:

**Household Industries or Cottage Manufacturing** It is the smallest manufacturing unit. Artisans use local raw materials, simple tools and production is done with the help of family members. Production is done for local consumption and local markets. There is not much capital needed, e.g. mats, baskets, pottery, jewellery, artefacts and crafts.

**Small Scale Manufacturing** These type of industries employ semi-skilled labour, operate by power driven machines, use local raw materials and manufacture products in workshops. It provides employment and raises local purchasing power. India, China, Indonesia and Brazil have developed labour intensive small scale manufacturing units.

**Large Scale Manufacturing** Here mass production takes place, involves large market, many raw materials, huge energy requirements, specialised workers, advanced technology and large capital. Large scale manufacturing industries are divided into two parts i.e. Traditional large scale industrial regions and Highly technology large scale industrial regions.

#### **Industries Based on Inputs/Raw Materials**

On the basis of raw materials used, industries are classified as follow:

• **Agro based Industry** This involves processing of raw materials from the fields and farms into finished products like sugar, fruit juices, beverages, oils and textiles (cotton, jute, silk), rubber, etc.

- **Food Processing** This is part of agro based industry and includes processes like canning, producing cream, fruit processing, confectionery, drying, fermenting and pickling.
- **Agri Business** This is commercial farming on an industrial scale. The farms are mechanised, very large and highly structured, like tea plantation and tea factories near the plantations.
- **Mineral based Industry** These are industries that use minerals as raw materials such as ferrous like iron and steel and non-ferrous like aluminium, copper, etc. Mineral based non-metallic industries are of cement and pottery.
- Chemical based Industry These industries use natural chemical minerals like salts, sulphur, potash, mineral oil in petrochemical industry and chemicals obtained from wood and coal. Synthetic fiber and plastics are other examples of chemical based industry.
- **Forest based Industry** Industries that use forest products such as timber, wood, bamboo, grass, lac, etc come under forest based industry.
- **Animal based Industry** Industries that use animal products such as leather, woollen textiles, ivory are grouped under animal based industry.

#### **Industries based on Output/ Product**

This refers to industries based on the finished products or output. These are:

- 1. **Basic Industries** These are the industries that produce raw material to be used in other industries such as iron and steel.
- 2. **Consumer Goods Industries** These are the industries which produces what is consumed by consumers directly such as tea, biscuits, toiletries, etc.

#### **Industries based on Ownership**

Based on the ownership, the industries are grouped as:

- **Public Sector Industry** This refers to industries that are owned and managed by government. In India, it is called public sector undertakings. Socialist economies have all state owned industries.
- **Private Sector Industry** This refers to industries that are owned by private individuals and also managed by them. Capitalist economies have mostly private owned industries.
- Joint Sector Industry Industries that are jointly owned and managed by joint stock companies or established by private and government sector are called joint sector industries.

#### **Foot Loose Industries**

These industries do not depend on any specific raw material so they can be located at any place. They largely depend on component parts, employ small labour force and produce in small quantity.

#### **Traditional Large Scale Industrial Regions**

Traditional large scale industries are mostly heavy industries located near coal fields and involved in metal smelting, heavy engineering, chemical manufacturing or textile production. Their features are high employment, high density of housing but poor services, unattractive environment, pollution and waste heaps. Due to these problems, many industries are closed leading to unemployment, emigration and wastelands.

#### The Ruhr Coal Field, Germany

- This area was a major industrial region due to coal and iron-ore deposits. But the industry started shrinking as demand of coal declined, iron-ore exhausted, industrial waste and pollution increased.
- Now a **New Ruhr** landscape has emerged that focuses on other products like Opel car assembly plant, new chemical plants, universities and out of town shopping centres.

#### **High Technology Industry**

- Also called high-tech industry, it is highly technical and incorporates advanced scientific and engineering research and development strategy.
- The workforce are highly skilled specialists, professionals (known as white collar) who outnumber the production labour (blue collar).
- Robotics, computer aided design and manufacturing, electronics, new chemicals and pharmaceuticals are examples of these industries.

#### **Iron and Steel Industry**

- It is known as basic industry as it provides raw materials or base to other industries. It is also called heavy industry due to its bulky raw material and heavy finished products.
- These industries are located near the source of raw materials i.e. iron ore, coal, manganese and limestone or near ports where it could be early brought.

#### **Distribution**

This industry is spread in developed and developing countries such as America, UK, Germany, France, Belgium, Ukraine, Japan, China and India (Jamshedpur, Durgapur, Raurkela, etc.)

#### **Cotton Textile Industry**

This industry has three sub-sectors:

- 1. **Handloom** This is labour intensive, employs semi-skilled workers, requires small capital and involves processes like spinning, weaving and finishing of the fabrics.
- 2. **Power loom** This is less labour intensive, uses of machines and production is more.
- 3. **Mill Sector** This is highly capital intensive, requires good quality raw cotton and produces in bulk.

#### **VERY SHORT QUESTION ANSWER**

Q.1. Mention any two major problems of the Ruhr industrial region.

**Answer:** The two major problems are as follows:

- (1) Changes in the industrial structure as the demand for coal declined, led to the decay of this region.
- (2) There are other problems related to industrial waste disposal and pollution.

#### **Q.2**. Define the term technopolies.

**Answer:** Technopolies is the term given to high-tech industries which are regionally concentrated, self-sustained and highly specialized,

E.g., Silicon Valley near San Francisco.

### Q.3. How has the 'New Ruhr' landscape emerged?

**Answer:** The 'New Ruhr' landscape has emerged as a result of more focus on the concentration of new industries like the huge Opel car assembly plant, new chemical plants, universities and out of town shopping centers.

#### **Q.4.** What is the household industry?

**Answer:** The household industry is the smallest unit of manufacturing, also known as a cottage industry. It is basically run by creative individuals or craftsmen who are assisted by their family members in their home.

#### **Q.5.** What is the importance of secondary activities in the world?

**Answer:** The importance of secondary activities is that these activities add value to the natural resources by the transformation of raw materials into useful and valuable products.

**Q.6.** Name three sub-sectors of cotton textile industry in the world.

**Answer:** Three sub-sectors of cotton textile industry are:

- (i) Handloom
- (ii) Power loom, and
- (iii) Mill sector.
- **Q.7.** Explain the characteristics of organizational structure and stratification of modern large scale manufacturing industry.

**Answer:** Modern manufacturing is characterized by:

- (a) A complex machine technology.
- (b) Extreme specialization and division of labour for producing more goods with less effort,
- (c) Low costs,
- (d) Vast capital,
- (e) Large organization,
- (f) Executive bureaucracy.
- **Q.8.** What factors have reduced the dependence of industry upon labour?

**Answer:** (i) Increasing Mechanization

- (ii) Automation
- (iii) Flexibility of Industrial processes.

#### **Q.9.** 'Secondary activities add value to natural resources.' Explain it.

**Answer:** Secondary activities add value to natural resources by transforming raw materials into more usable products. Most of the materials from the farm, forest, mine and the sea are

transformed into valuable products. Secondary activities, therefore are concerned with manufacturing, processing and construction (infrastructure) industries.

**Q.10.** Which processes help secondary activities?

**Answer:** Secondary activities change the form and value of raw material by the following process:

- Manufacturing
- Processing
- •Construction.
- **Q.11.** Explain the main characteristic of professional workers (White collar).

**Answer:** White collar workers does clerical workman in an office and draws monthly salaries at a fixed price. They perform managerial work for the organization.

**Q.12.** What are characteristics of modern manufacturing?

**Answer:** Modern manufacturing is characterized by:

- A complex machine technology
- •Extreme specialization and division of labour for producing more goods with less efforts.
- Vast capital
- •Large organizations and
- •Executive bureaucracy.

**Q.13** Classify industries into two groups on the basis of metallic minerals. **Answer:** Industries classified on the basis of metallic minerals are ferrous and non-ferrous industries.

#### SHORT ANSWER BASED QUESTIONS

**Q.1.** What are the characteristics of traditional large scale Industrial regions?

**Answer:** Traditional Large-Scale Industrial Regions

These are based on heavy industry, often located near coalfields and engaged in metal smelting, heavy engineering, chemical manufacture or textile production. These industries are now known as smokestack industries.

Traditional industrial regions can be recognized by:

- † High proportion of employment in manufacturing industry.
- High-density housing, often of inferior type, and poor services.
- † Unattractive environment, for example, pollution, waste tips, and so on.
- † Problems of unemployment, emigration and derelict land areas caused by closure of factories because of a world-wide fall in demand.

#### **Q.2.** Write a short note on cotton textile industries of the world?

**Answer:** Textile Industries. These are labor-intensive industries that require less-skilled, low-cost workers. The production steps include spinning of fiber, weaving of yam, and finishing of fabric. Manufacturing is concentrated in countries where the main raw material-cotton-is grown. China, India, Pakistan, USA and Uzbekistan grow and produce more than half of the world's cotton and cotton textiles.

The UK, Northwest Europe and Japan are also leading manufacturers depending on imported fiber and yarn. Europe alone accounts for nearly half of the world cotton imports. The industry has now declined in many countries but the main centers still retain some of the

finishing trades. The future of the industry is bright in Asian countries due to the rising standard of living and a booming global market.

**Q.3.** Explain any five characteristics of high-tech industry in the world.

**Answer:** (i) Professional workers make up a large share of the total workforce.

- (ii) Neatly spaced, low and modern offices and factories, along with planned business parks for high-tech start-ups are its characteristics.
- (iii) High-tech industry is regionally. Concentrated, self sustained and highly specialised and known as technopolies.
- (iv) For high-tech startups planned business parks have become part of regional and local developments.
- (v) High-tech industries are the latest generation of manufacturing activities.
- **Q.4.** Explain the characteristics of 'Foot Loose Industries'.

**Answer:** (i) Foot loose industries can be located in a wide variety of places.

- (ii) They do not depend on any specific raw material, weight losing or otherwise.
- (iii) They are dependent on component parts which can be obtained from anywhere.
- (iv) They produce in small quantity and also employ a small labour force.
  - (v) They do not cause any kind of pollution.
- **Q.5.** Explain any three characteristics of organizational structure and stratification of modern large scale manufacturing industry.

**Answer:** The characteristics of modern large scale manufacturing industries are as follows: Complicated Organization Modern large scale industrial processes consist of multiple activities to run the industries.

Specialized and Skilled Labour The specialized and skilled labour is required in the modern manufacturing industries. Thus, skilled manpower is increasing.

Use of Power Resources These industries widely uses huge power to run heavy machines in the production process.

**Q.6.** Explain any four features of small manufacturing.

**Answer:** Characteristics:

- •Small manufacturing uses local raw materials.
- •Semi-skilled labour is used.
- •The goods are sold in local markets.
- •It provides employment in large number.
- **Q.7.** Define the term manufacturing. Explain any four features of small scale manufacturing. **Answer:** Manufacturing means to make by hand, however now it includes goods made by machines. It is essentially a process which involves transforming raw materials into finished goods for higher value for sale in local or distant markets.

The four features of small scale manufacturing are as follows:

- •It differs from household industries and large scale industries by its production techniques and place.
- •This type of manufacturing uses local raw material, simple power driven machines and semi-skilled labour.
- It provides employment and raises local purchasing power.

•These manufacturing units have developed labour intensive techniques in order to provide employment to their population.

Q.8 Differentiate between small scale manufacturing and large scale manufacturing.

large scale manufacturing	Small scale manufacturing	
1. Large scale industries use power driven heavy machines.	1. Small scale industries use small power driven machines.	
2. Large amount of capital is invested.	2. A small amount of capital is invested.	
3. These industries form the basis of development in developed countries.	3. These industries provide employment in developing countries.	

**Q.9.** Describe any three characteristics of agro based industries in the world.

Agro - Industries	Heavy Industries
1. Agro - industries are based on products of primary occupations such as agriculture.	1. Heavy industries are based on manufactured goods involving use of machines.
	2. A number of complex products are manufactured from semi finished goods as iron used in the making of machinery.
3. These are labour intensive industries.	These are capital intensive industries.

**Q.10.** "Africa has immense natural resources and yet it is industrially the most backward continent." Lack of which value leads to this backwardness in Africa. **Answer:** Lack of following values leads to the backwardness of Africa:

- Nationalism
- •Social welfare
- •Caring attitude towards people.

#### LONG ANSWER TYPE QUESTIONS

**Q.1.** Explain five factors that influence the industrial location in the world. **Answer:** Factors influencing the industrial location in the world are as follows:

**Access to Market:** Market refers to the people for whom goods are manufactured. Market affects the location of an industry. A manufacturing unit is established near the market area. Areas having more population are big markets for manufactured goods, as compared to areas having less population. Apart from it, areas having a population with more purchasing power also have a big market.

Access to Raw Material: Industries that use heavy, bulky and weight-losing raw materials are established near the source of raw material. For e.g. in sugar industries, sugarcane is a perishable and weight-losing raw material. To reduce the transport cost, industries are located near a source of raw material.

Access to Sources of Energy: Industries using more power and energy are established near the source of energy, e.g. aluminium industry.

Access to Transportation and Communication: Industries are located in areas that have an efficient transport network to get the raw material from various regions and supply manufactured goods to market. Communication network is also needed to communicate with the consumers. Thus, transport and communication are important factors that affect the location of an industry.

**Government Policies:** Favorable government policies that promote industrialisation is also important in deciding the location of an industry.

**Q.2.** Define the term manufacturing. Explain any four features of small scale manufacturing.

**Answer:** Manufacturing means to make by hand, however now it includes goods made by machines. It is essentially a process which involves transforming raw materials into finished goods for higher value for sale in local or distant markets.

The four features of small scale manufacturing are as follows:

- → It differs from household industries and large scale industries by its production techniques and place.
- → This type of manufacturing uses local raw material, simple power driven machines and semi-skilled labour.
- → It provides employment and raises local purchasing power.
- → These manufacturing units have developed labour intensive techniques in order to provide employment to their population.
- **Q.3.** Explain the role of power and raw material in the location of heavy industries in India.

**Answer:** Power All the Industries require energy as they are run by energy such as cotton textile and Iron and steel Industries.

Role of power is as follows;

Power provides the motive force for machines.

- ‡ Its supply has to be ensured before the location of any Industry.
- † Certain Industries like aluminum and synthetic nitrogen manufacturing industries tend to be located near sources of power.

Raw material Industries are located in those areas where the raw material is available near to the industry. Role of raw material is as follows:

- † Industries using weight-losing raw materials are located in the regions where the raw material is located.
- Fugar mills, pulp industries, copper smelting and pig iron industries are located near their raw material.
- † Most of the iron and steel industries are located near coal fields or near sources of iron ore.
- **Q.4.** Explain the significance of the iron and steel industry of India giving three points.

**Answer:** Iron and. the steel industry is basic to the industrial development of the country. The development of the iron and steel industry opened the doors to the rapid industrial development in India.

The main significance of the iron and steel industry are:

- 1. Almost all sectors of the Indian Industry depend heavily on the iron and steel industry for their basic infrastructure.
- 2. It provides the raw material for other industries such as machine tools used for further production.
- 3. Iron and steel provide a base for all other industries, so it is called a basic industry.
- **Q.5.** How are technological innovations an important aspect of modern manufacturing industries? Explain any three aspects in this regard.

**Answer:** Technological innovations through research and development strategies are an important aspect of modern manufacturing for quality control, eliminating waste and inefficiency and combating pollution.

Three aspects in this regard are as under:

- † Complex machine technology is needed so that high quality goods are produced at less time.
- ‡ It requires vast capital so that machines with the latest technology can be used in manufacturing.
- ‡ Extreme specialization and division of labour is required, that can work efficiently on the machines.
- **Q.6.** Define manufacturing. Classify manufacturing industries on the basis of size into three categories and explain the important characteristics of each type.

**Answer:** For definition and characteristics of manufacturing industries,

Manufacturing means to make by hand, however now it includes goods made by machines. It is essentially a process which involves transforming raw materials into finished goods for higher value for sale in local or distant markets.

The four features of small scale manufacturing are as follows:

- † It differs from household industries and large scale industries by its production techniques and place.
- † This type of manufacturing uses local raw material, simple power driven

machines and semi-skilled labour.

- ‡ It provides employment and raises local purchasing power.
- † These manufacturing units have developed labour intensive techniques in order to provide employment to their population.

On the basis of their size, industries are classified into the following:

#### **Cottage Manufacturing**

- † It is the smallest manufacturing unit.
- † The artisans use local raw materials.
- Part time labour or artisan's family members produce everyday goods in their homes with the help of simple tools.
- Finished goods may be used for consumption in the same household or for sale in the local market.

### **Large Scale Manufacturing**

- ‡ It requires a large market.
- ‡ It needs enormous energy and various raw materials.
- ‡ It also requires specialized workers, advanced technology, assembly line mass production and huge capital.
- Now, it has diffused to almost all over the world.

#### **Q.7.** Write a short note on Silicon Valley.

**Answer:** 'Silicon Valley' technopolis:

The development of Silicon valley is attributed to the work of Frederick Terman, a professor and later, Vice-President of Stanford University at Palo Alto, in the northwestern part of Santa Clara country in California. In 1930s, Terman encouraged his students in electrical engineering to stay in the areas and establish their own companies.

One of the first companies was set up by William Hewlett and David Packard in a garage near the University campus. Now it is one of the world's largest electronic firms. By the end of 1950s Terman had persuaded Stanford University to develop a special industrial park for such new high-tech firms. It created a hot house of innovation and generating a significant specialized work force and produce services.

It has sustained the continued agglomeration of high-tech electronics and has also attracted other high-tech industries. For example, nearly a third of all employment in biotechnology in the USA is located in California. Of this, over 90 percent is located in the San Francisco Bay area. Stanford University has been receiving increasing amount of donations from grateful companies, which runs into millions of dollars annually.

**Q.8** Explain the locational factors of industries with the help of suitable examples. **Answer:** Manufacturing. Manufacturing is a secondary process of transforming raw materials into finished products. The raw materials of agriculture, forests, minerals are changed into new products. For example, clay is changed into pottery; timber is changed into furniture.

These manufactured goods are more useful and valuable than the raw materials. The location of manufacturing industries depends on a number of physical and socio-economic factors. These factors are called the basis of industries. No single factor decides the location of industries

**1. Nearness to raw materials:** Large quantities of raw materials are needed for industries. Therefore, industries are located near the source of raw materials. The industries are located

near mines, forests, farms and seas. It saves the cost of transportation. Sugar mills are located in the areas where sugarcane is produced.

Iron and steel industry uses bulky raw materials. Steel centers are developed where coal and iron are easily available. Industries producing perishable goods (meat, fish and dairy products) are located near the areas of production. Example: Jute mills in West Bengal and Cotton Textile mills in Maharashtra are located due to the availability of the raw materials.

**2. Power resources:** Coal, oil and water power are the main sources of power. Most of the industries are located around coal-fields. The industrial regions of Damodar Valley (India) and Ruhr Valley (Germany) depend upon coal.

Some industries use large amount of electricity. Such industries like chemical industries, aluminium industries and paper industry are located near hydro electric stations; Petrochemical Industries use large quantities of petroleum. Example: Iron and steel centres in India are located near Jharia and Raniganj coal-fields. Chemical fertilizer plant is located at Nangal where cheap water power is available from Bhakra Project.

**3. Means of transportation:** Modern industries need cheap, developed arid quick means of transportation. Water-transport is the cheapest means of transport. Cheap means of transportation are required for the movement of workers, raw materials and machinery to the factories.

Manufactured goods should be sent to the market at low cost. Example: The great industrial regions of the world (Europe and the U.S.A.) lie at the ends of North Atlantic Ocean Route. Great Lakes provide cheap transport to the industrial region of the U.S.A.

- **4. Climate:** Stimulating climate increases the efficiency of the labourers. Certain industries require special type of climate. Cotton Textile industry requires humid climate. Film industry needs good weather with clear blue sky. Areas with favourable climate become huge markets. Examples: Mumbai is the leading centre of Cotton Textile due to wet coastal climate. Dry climate has led to the location of Aircraft Industry at Bengaluru (India) and California (U.S.A.).
- **5. Capital:** Large amount of capital is invested in many industries. Many industries have been located in big cities like Delhi, Mumbai and Kolkata. Many banks and companies provide capital in these areas.
- **6. Skilled labour:** Cheap and skilled labour is essential for the location of the industries. Areas of dense population provide cheap and large labour force. Engineering industries need skilled labour.

Example: Cotton Textile industry in Lancashire, Glass industries in Ferozabad, Sports goods industry in Jalandhar are located due to availability of the skilled labour. The Swiss are known for watch making, the British for specialized cotton textiles, the Japanese for electronic goods and Varanasi is known for silk embroidery.

## CASE BASED QUESTIONS PASSAGE 1

Secondary activities add value to natural resources by transforming raw materials into valuable products. Cotton in the boll has limited use but after it is transformed into yarn, becomes more valuable and can be used for making clothes. Iron ore, cannot be used; directly from the mines, but after being converted into steel it gets its value and can be used for making many valuable machines, tools, etc. The same is true of most of the materials fro, the farm, forest, mine and the sea. Secondary activities, therefore, are concerned with manufacturing, processing and construction (infrastructure) industries.

**1.** How Secondary activities add value to natural resources?

**Ans.** Secondary activities add value to natural resources by transforming raw materials into valuable products.

**2.** Which mineral cannot be used directly from the mines?

**Ans.** Iron ore cannot be used directly from the mines, but after being converted into steel it gets its value and can be used for making many valuable machines, tools, etc.

**3.** Which activity are concerned with manufacturing and processing?

**Ans.** Secondary activity are concerned with manufacturing, processing and construction (infrastructure) industries.

#### PASSAGE 2

This has been one of the major industrial regions of Europe for a long time. Coal and Iron and Steel formed the basis of the economy, but as the demand for coal declined, the industry started shrinking. Even after the iron ore was exhausted, the industry remained, using imported ore brought by waterways to the Ruhr. The Ruhr region is responsible for 80 percent of Germany's total steel production. Changes in the industrial structure have led to the decay of some areas, and there are problems of industrial waste and pollution. The future prosperity of the Ruhr is based less on the huge OPel car assembly plant, new chemical plants, universities. Out of- town shopping centers have appeared resulting in a 'New Ruhr' landscape.

1. What is the name of the Coal field and where is it located?

**Ans.** The name of the coal field and it is located in Germany.

**2.** Which mineral has formed the bases of economy for this region?

**Ans.** Coal and iron and steel formed the basis of the economy, but as the demand for coal declined, the industry started shrinking. Even after the iron ore was exhausted, the industry remained, using imported ore brought by waterways t the Ruhr.

**3**. What kind of problem this region is facing?

**Ans.** Changes in the industrial structure have led to the decay of some areas, and there are problems of industrial waste and pollution.

#### PASSAGE 3

The iron and steel industry forms the base of all other industries and, therefore, it is called a

basic industry. It is basic because it provides raw material for other industries such as machine tools used for further production. It may also be called a heavy industry because it uses large quantities of bulky raw materials and its products are also heavy. Iron is extracted from iron ore by smelting in a blast furnace with carbon (coke) and limestone. The molten iron is cooled and molded to form pig iron which is used for converting into steel by adding strengthening materials like manganese. The large integrated steel industry is traditionally located close to the sources of raw materials – iron ore, coal, manganese and limestone – or at places where these could be easily brought, e.g. near ports. But in mini steel mills access to markets is more important than inputs. These are less expensive to build and operate and can be located near markets because of the abundance of scrap metal, which is the main input. Traditionally, most of the steel was produced at large integrated plants, but mini mills are limited to just one-step process – steel making and are gaining ground

#### **1.** Why iron and steel industry are called basic industry?

**Ans.** Iron and Steel industry are called basic industry because it provides raw material for other industries such as machines tools used for further production.

#### **2.** Why Iron and steel industry are called Heavy Industries?

**Ans.** It may also be called a heavy industry because it uses large quantities of bulky raw materials and its products are also heavy.

#### **3.** How Iron is extracted from Iron ore?

**Ans.** Iron is extracted from Iron ore by smelting in a blast furnace with carbon (coke) and limestone. The molten iron is cooled and molded to form pig iron which is used for converting into steel by adding strengthening materials like manganese.

## **Tertiary and Quaternary Activities**

#### **Types of Tertiary Activities**

There are four types of tertiary activities. They are trade, transport, communication and services. These include provision of services in exchange of payments.

#### **Trade and commerce**

Trade and commerce is essentially buying and selling of items produced elsewhere. The collection and distribution points where trading takes place are called trading centres. These centres are divided into:

- **Rural Marketing Centres** They are quasi urban and cater to local needs and areas. Most of these have mandis (wholesale markets) and retail markets. In rural areas, there are **periodic markets** that may be weekly or bi-weekly and people from the nearby areas meet their demands. These markets are held on specified dates and shopkeepers move from one place to another.
- **Urban Marketing Centres** These markets sell ordinary as well as specialised goods and services, e.g. markets for labour, housing, semi or finished products. Services of educational institutions and professionals like teachers, doctors, lawyers also develop.
- **Retail Trading** In this type of trading, goods are directly sold to consumers. This trading is done through fixed establishments or stores, small shops, consumer cooperatives, big departmental stores and chain stores. The chain stores buy commodities in bulk and then hire skilled specialists for executive tasks. Street peddling, handcarts, trucks, door-to-door, mail order, telephone and Internet are examples of non-store retail trading.
- Wholesale Trading Here bulk buying takes place directly from the manufacturer by numerous intermediary merchants. The merchants/ wholesalers extend credit to retailers.

#### **Transport**

Transport is a tertiary activity in which people, materials and manufactured goods are physically carried from one place to another. While selecting the mode of transport, distance, time and cost are seen.. Distance can be measured as km distance, time taken to travel particular route as time distance, expense of travelling on a route as cost distance.

#### **Factors Affecting Transport**

Demand and routes are two major factors which affect transport services.

- **Demand** Transport depends on the size of population and standard of living of people. The larger the population size, the greater is the demand for transport.
- **Route** It refers to the transport network depend on location of cities, towns, villages, industrial centres, availability of raw materials, nature of landscape, type of climate, availability of funds, etc.

#### Network

A network is a well developed transport system that is made up of nodes and links. A node is a meeting point of two or more routes and every road that joins any two nodes is called a link.

#### Communication

Communication services involve in the transmission of words, messages, facts and ideas. The development of transport facilitated communication as messages were carried by hand, animals, boat, road, rail and air. But new technology has made communication independent of transport, such as mobiles, telephony and satellites. Some of the communication services are discussed below:

- **Telecommunications** The development of modem technology has revolutionised communication and it has become direct and instantaneous, e.g. telegraph, morse code and telex in last century and now satellites, mobile, telephony, etc are used.
- Mass Media Communication means through which messages could be sent to vast audiences around the world are called mass media, e.g. radio, television, newspapers, etc. The Internet has revolutionised the global communication.

#### **Services**

There are different levels at which services are provided and availed. Some are meant for industry, some for people, and some for both industry and people i.e., transport. Services can be divided into three sub-categories. They are:

- Low Order Services It includes common and widespread services like grocery shops, laundries, etc.
- **Domestic Services** It includes housekeepers, cooks and gardeners which migrate from rural areas in search of employment.
- **High Order Services** These are specialised and less common like accountants, consultants and physicians. Some services are supervised and/or regulated by government like making, maintaining highways, bridges, fire fighting departments, education, healthcare, etc.

Thus, services are present in organised sector that is government owned or big corporations. Some are present in unorganised sector like low order and domestic services. Mumbai's dabbawala in India is one such service of unorganised sector.

#### **People Engaged in Tertiary Activities**

Earlier more number of people were employed in the primary and secondary sector as these sectors provided more jobs. But, now there has been a shift of jobs to tertiary or service sector. In developed countries, a higher percentage of workers are employed in providing services as compared to less developed countries.

#### **Some Selected Examples**

Some of the selected examples that are related to the people engaged in tertiary activities are as follows: %

#### Tourism

Tourism is part of service sector that refers to travel undertaken for purpose of recreation rather than business. This industry generates jobs as people are engaged in providing accommodation, meals, transport, entertairment, infrastructure retail trading and crafts.

#### **Tourist Regions**

- Tourism can be seasonal or throughout the year like warmer places around the Mediterranean coast, West coast of India during winters, mountains in summers or winter spots regions found mainly in mountainous areas.
- Historic towns, religious places, heritage sites offer tourism throughout the year. Factors Affecting Tourism
- The rise in tourism industry is due to increased demand for it which is thus influenced by improvement in standard of living and increased leisure time.
- Another factor is improvement in transportation that has made travel easier and destinations reachable.

#### **Tourist Attractions**

Tourist attractions are specific features of a place that attract people. These are as follows:

- **Climate** In winter holidays, areas having warm sunny weather is preferred like beaches in Southern Europe, so it attracts more number of tourists there.
- **Landscape** Mountains, lakes, spectacular sea coasts and landscapes not completely altered by man are good tourist attractions.
- **History and Art** Ancient or picturesque towns, archaeological sites, historically important places having castles and palaces attract tourists.
- Culture and Economy Areas having rich cultures attract people as they go their to experience ethnic and local customs. Places giving economic benefits are also attractions such as cheap home stays in Goa, Madikere and Coorg in Karnataka.

#### **Medical Services for Overseas Patients in India**

Medical services or tourism takes place when medical treatment is combined with international tourism activity. People from developed countries like US are visiting India for medical tourism or services. This brings economic benefits to India and other countries where medical tourism is taking place like Thailand, Singapore and Malaysia.

Other medical related activities such as outsourcing of medical tests, data interpretation, reading radiology images, interpreting Magnetic Resonance Images (MRIs) and ultrasound tests are taking place in India, Australia and Switzerland.

#### **Quaternary Activities**

The activities related to knowledge oriented, involving collection, production and dissemination of information come under quaternary activities. They centre around research development and may involve specialised knowledge and technical skills.

Software developers, mutual fund managers, doctors, accounting, brokerage firms are some examples of quaternary activities. They can be outsourced even as these are not tied to resources or affected by the environment or markets. This sector has replaced primary and secondary sector and absorbs half of the population in developed economies.

#### **Quinary Activities**

The activities that are highly specific and specialised are placed under it. These include high level decision-makers, administrators, government officials, research scientists, etc. They are also known as gold collar professions.

#### **Outsourcing**

- It means contracting out or giving work to an outside agency to improve efficiency and to reduce cost. It is termed as off-shoring when work is transferred to overseas location.
- Outsourcing provides employment in developing Countries of India, China, Botswana, etc. Information technology, human resources, customer support, call centres, data processing and other IT related services are examples of outsourcing.

#### **BPO**

- BPO stands for Business Process Outsourcing which involves customer support services, call centres and similar other processes.
- The developed countries transfer these jobs as overhead costs are much lower making it profitable to get job work carried out.

#### **KPO**

KPO stands for a Knowledge Process Outsourcing which involves skilled workers and enables companies to create additional business opportunities, e.g. e-leaming, business research, etc.

#### The Digital Divide

- Development emerging from the information and communication technology is unevenly spread across the globe. Some regions have prospered while others are lagged behind. This is known as digital divide.
- In developing countries, this kind of divide is seen more than developed countries. Here, the metropolitan cities are developed more than rural areas.

### **VERY SHORT ANSWER TYPE QUESTIONS**

**Question1.** Give the meaning of the digital divide.

**Answer:** A digital divide is an economic and social inequality arising in the countries due to unequal access and use of knowledge or Information and Communication Technologies (ICT).

Question2. Define the term 'quaternary activities'.

**Answer:** Quaternary activities refer to the more intellectual occupations whose task is to think research and develop ideas. It is concerned with high-order of professional and administrative services, information generation, processing and transmission.

**Question4.** Give any two examples of quaternary activities.

**Answer:** Examples of quaternary activities are:

- Collection of information.
- Production of information.

**Question5.** Give the meaning of retail trading services.

**Answer:** Retail trading services link the producers with consumers. It is the business activity concerned with the sale of goods directly to consumers. Street peddling, handcarts, trucks, online order, etc are examples of non-store retail trading.

Question6. Give any two examples of tertiary activities.

**Answer:** Examples of tertiary activities are trade and commerce and transport.

**Question7.** Who is an empowered worker?

**Answer:** Empowered workers are people who are engaged in re-arrangement and interpretation and the use and evaluation of new technologies. They come under the category of quinary activities.

Question8. Define the term 'tourism.'

**Answer:** Travelling with the motive of recreation rather than business is called tourism. It is a business of providing hotels, restaurants, entertainment, etc for people who are travelling.

#### Q-9 What are quaternary services?

**Ans.** Quaternary activities involve some of the following: the collection, production dissemination of information or even the production of information.

#### Q-10 What is a techno pole?

**Ans.** A techno pole is a concentrated place of modern industries and production which is based on industrial planning.

#### Q-11 What are the major components of services?

**Ans.** Major components of services may be grouped as follows: –

- (i) business services including advertising, legal services ,public relations and consultancies
- (ii) Finance, insurance and real estate including saving and banking services.
- (iii) Wholesale and retail trading linking the producers with consumers.

Personal services such as maintenance services, beauticians and repair works.

- (iv) Transport and communication including post and telegraph services.
- (v) Entertainment including T.V., Radio, Films and publishing.
- (vi) Govt, services including bureaucrats, police, army.
- (vii) Non.Govt. agencies setup for charity, education, health care rural development etc.

## Q-12 Why is the share of employment in tertiary sector increasing throughout the world? Give reason.

**Ans** – The share of employment in the tertiary sector is increasing throughout the world due to –

- Increase in per capita income in developed countries.25
- Development in medical facilities. The changes have taken place in demographic structure in developed nations and demand in medical facilities has increased for adult population.
- Enhancement in educational services
- Acceleration in public sector services.
- Out sourcing in developed nations

# Q-13 How do the tertiary occupation helpful in the economic development of a country? Explain with suitable example.

**Ans** – In service sector the gross and retail sale is included and it includes mean of transportation which joins the producers and the consumers.

- These occupations are helpful for To and For supply of raw material and manufacture goods for the factories.
- Health welfare, education, amusement and commercial services are helpful in the economic development of the nation.
- These occupations have increase employment opportunities.
- Service sectors is considered as the last stage of the development.

#### SHORT ANSWER BASED QUESTIONS

**Question1.** Explain any three characteristics of quaternary activities.

**Answer:** The three characteristics of quaternary activities are as follows:

- 1. Quaternary activities centre on research and development and may be seen as an advanced form of services involving specialised knowledge and technical skills.
- 2. Quaternary activities involve the collection, production and dissemination of information.
- 3. Like some of the tertiary functions, quaternary activities can also be outsourced. They are not tied to resources, affected by the environment or necessarily localised by markets.

**Question2.** Explain any three characteristics of periodical markets of rural areas in the world. **Answer:** The three characteristics of periodical markets of rural areas in the world are as follows:

- 1. Periodical markets in rural areas are found where there are no regular markets. Local periodical markets are organized at different intervals.
- 2. These may be weekly; bi-weekly markets and people from the surrounding areas meet their demand.

3. These markets are held on specific days and move from one place to another. The shopkeepers thus, remain busy on all the days while a large area is served by them.

**Question3.** What are the two factors affecting tourism in the world? Explain each factor with example.

**Answer:** The two factors affecting tourism in the world are:

**Demand:** It is the prime factor for tourism. For last few Centuries, the demand for recreational and entertainment related activities have increased significantly. The living of the people is being standardized and the nature of work is creating demand for tourism.

**Transport:** The second important factor that affects the tourism sector is transport. The development in transport sector increases the demand for tourism. The easy accessibility to tourist locations and places encourages people to move or visit there. The expansion of air and rail network in the last decade has influenced tourism in increasing the number of tourists. Apart from this, the improvement in infrastructure as tourist spots has also increased demand for tourism.

**Question4.** 'Outsourcing has resulted in opening up a large number of job opportunities in several countries.' Analyze the statement with three suitable examples. **Answer:** Outsourcing has resulted in the opening up of a large number of call centers in India, China, Eastern Europe, Israel, Philippines and Costa Rica. It has created new jobs in these countries. Outsourcing is coming to those countries where cheap and skilled workers are available. These are also out-migrating countries. But with the work available in the form of outsourcing, the migration from these countries has come down.

This can be explained through these examples:

- 1. The Knowledge Processing Outsourcing (KPO) industry includes research and development, e-learning, business research, etc.
- 2. The Business Process Outsourcing (BPO) industry involves highly skilled workers. It is information driven knowledge outsourcing.
- 3. Data processing is another IT related service that employs large number of people in Asian countries.

**Question5.** How does the climate of a region attract tourists? Explain with examples from different regions of the world.

**Answer:** The climatic conditions of any region decide the demand for tourism. The climate of a region attracts tourists in the following ways:

- 1. People from colder places want to visit warm places as tourist. That's why the Mediterranean lands and Southern Europe, due to their considerable higher temperature, sunny days and less rainfall attract tourists from Europe.
- **2.** People from warmer regions love to visit colder places. That's why tourists from Northern plains of India prefer to go to tourist places located in the Himalayan region or other hill stations.
- **3.** Climatic conditions of a region also provide some adventurous activities to do and attract tourists, e.g. ice skating and skiing in snowy regions, sea surfing on beaches, etc.

**Question6.** Compare the features of rural and urban marketing centers of the world in three points.

**Answer:** Comparison between the features of rural and urban marketing centers is given below:

Basis	Rural Marketing Centres	<b>Urban Marketing Centres</b>
	They provide services to nearby	They serve the needs of a large
Serving area	settlements.	area as compared to rural
		marketing centres.
	They sen/e as trading centres of	They provide specialised urban
	quasi-urban type. Personal and	services. They provide ordinary
Nature of	professional services are not	goods and services as well as
services	well-developed here.	many of the specialised goods and
		services.
	They are local collecting and	Urban centres offer manufactured
	distributing centres. Most of	goods, as well as many
	these have mandis (wholesale	specialised markets, develop, e.g.
Types of	markets) and also retailing areas.	markets for labour, housing, semi
services		or finished products, services of
		educational institutions and
		professionals such as teachers,
		lawyers, physicians, etc.

**Question7.** What is tourism? Analyze any four tourist attractions in the world.

#### OR

Define the term tourism. Explain any four factors which attract tourists in the world.

**Answe**r: Tourism is travel which is done for the purpose of recreation rather than business. It is one of the largest sectors of tertiary activities in terms of providing employment. It also generates the largest revenue. The four factors which attract tourists in the world are as follows:

Climate The climatic conditions of any region decide the demand for tourism. People from colder places want to visit warm places and vice versa. People from hilly terrain want to visit beaches and people living around sea-shore wish to visit hilly areas, e.g. the Mediterranean lands and Southern Europe, due to their considerable higher temperature during winters attract tourists from Europe.

**Landscape** Attractive environment like mountains, lakes, spectacular sea coasts and landscapes not completely altered by man are important tourist destinations.

**History and Art** The archaeological site attracts more people because of its rich past. The area with historical remains like castles, forts, battle fields, palaces, religious monuments, excavation sites are tourist attractions.

**Culture and Economy** For experiencing ethnic and local customs, tourists like to visit a place. Besides, if a region provides the needs of tourists at a cheap cost, it is likely to become very popular.

**Question8.** What is medical tourism? Explain the scope of medical services for overseas patients in India.

**Answer:** When medical treatment is combined with international tourism activity, it leads itself to what is commonly known as medical tourism. The scope of medical tourism for overseas patients in India is as follows:

- 1. In 2005, about 55,000 patients from USA visited India for treatment. In this way, India has emerged as the leading country of medical tourism in the world.
- 2. It brings foreign currency to India.
- 3. World class hospitals with latest technology are located in metropolitan cities of India. These hospitals cater to patients all over the world.
- 4. This kind of tourism brings abundant benefits to developing countries like India. Therefore, medical tourism has wide scope in India.

**Question9.** 'Services are very important aspect for economic development of a country.' Analyze the statement by explaining five components of a service sector.

**Answer:** Service sector is very important for the development of economy in the world. It is related to all kinds of services like education, health, welfare, business services, etc in exchange of payments. This sector also provides employment to a large number of people. The major components of services are:

- Business services like advertising, legal services, public relations and counseling.
- Finance, insurance and real estate includes banking services.
- Wholesale and retail trading with the producers and consumers.
- Transport and communication such as railway, roadway, shipping, airline services, etc.
- Entertainment and mass media such as television, radio, films, magazines and newspapers.

### **Value Based Questions**

**Question1.** Cities of developed and developing countries reflect marked differences in their planning and development. Which values lead to development of these cities? **Answer:** The values which leads to development of these cities are:

- Patriotism
- Mass-Centric policy
- Democratic principles

**Question2.** "Tertiary activities include both production and exchange. The production involves the provision of services that are consumed. The output is indirectly measured in terms of wages and salaries. Exchange involves trade, transport and communication facilities that are used to overcome distance. Tertiary activities therefore involve the commercial output of services rather than the production of tangible goods." What values can be learnt from above passage?

**Answer:** The passage shows us the values of:

- Participation of community
- Public welfare
- Economic development

## **Transport and Communication**

#### **Transport**

Transport is a facility or a service for the carriage of persons and goods from one place to another using humans, animals and different kinds of vehicles. It is an organised service industry that handles loading, unloading and delivery.

#### **Modes of Transportation**

- The main modes of transportation are land, water, air and pipelines. These are used for inter-regional and intra-regional transport, and each one (except pipelines) carries both passengers and goods.
- Several places (nodes) join together by a series of routes (links) to form a pattern is called transport network.

#### **Land Transport**

This includes movement of goods and services over land i.e. roads and rails. Earlier humans themselves were carriers such as in palanquin (palki or doli), later pack animals such as mules, horses, camels were used. Dogs and reindeers were used in North America. In India, bullocks were used to pull carts. The revolution came after invention of steam engine in 18th century that started railways and roadways with the invention of internal combustion engines. Among the new means of land transport are pipelines, ropeways and cableways. Rope and cableways are generally found on steep mountain slopes and mines, which are not suitable for building roads.

#### Roads

It is most economical for short distance and gaining importance for freight transport due to its door to door service. Metalled roads are all weather roads while unmetalled roads are not serviceable in all seasons due to their simple construction. Though heavy rains and floods make both the roads unserviceable. The quality, construction and maintenance of roads is better in developed countries than in developing countries as it requires heavy expenditure.

#### **Road Density**

- The total motorable road length of the world is only about 15 million km, in which North America separately accounted 33%. Although, North America in compare to Western Europe registered highest number of vehicles as well as highest road density.
- Road density is the total length of roads per hundred square kilometre of area.

#### **Traffic Flows**

It refers to traffic on roads that has increased dramatically in recent years. As the road network cannot cope with the demands of traffic, so congestion occurs.

#### **Highways**

- They are metalled roads connecting distant places for unobstructed vehicular movement. These are 80m wide with separate traffic lanes, bridges, flyovers and dual carriageways
- In North America, there is dense network of highways. Pacific coast is linked to Atlantic coast, Vancouver is connected to Newfoundland by Trans-Canadian highway and Edmonton is connected to Anchorage through Alaskan highway.
- Trans-continental Stuart highway connects Darwin, Melbourne to Alice springs in Australia. Europe has well developed highway network. Moscow-Vladivostok highway is important for Russia. Highways criss-cross the country in China.
- In India, National Highway No.7 (NH7) connecting Varanasi and Kanyakumari is the longest highway of the country. (The golden quadrilateral or super expressway is under construction). Now, NH-44 became the longest running highway in India. It connects Srinagar to Kanyakumari. NH-7 is renamed as National Highway 44. In Africa, Algiers in North is connected to Guinea and Cairo connected to Capetown in South.

#### **Border Roads**

These are roads laid along international boundaries. These roads help in transport of goods to border areas and military camps.

#### **Railways**

Railways are best suited for the transportation of bulky goods and passengers over long distances. Highly industrialised areas, urbanised regions and mineral rich areas are linked to railways for the transportation of ores, grains, timber and machinery. All the continents have dense network while Europe is having the highest density of railways. The railway network of Africa, Asia and South America connects the mineral rich and fertile areas and is developed primarily to utilise the natural resources.

#### **Trans-Continental Railways**

The railway line that runs across the continent and links its two ends is called a transcontinental railway line. They are constructed for economic and political reasons. The following are the most important of these:

#### **Trans-Siberian Railway**

It is in Russia and the longest railway in the world. It runs between St. Petersburg in West to Vladivostok in East, passing through Moscow, Irkutsk, Chita, etc. It links important agro centre with fur centre connecting rail routes to important cities of Asia.

#### **Rans-Canadian Railway**

Constructed in 1886, it is 7050 km long railway in Canada that links Halifax in East to Vancouver in West. It passes through the industrial region connecting the wheat belt of Prairies and the coniferous forest area so it is considered economic artery of Canada. Wheat and meat are the important exports on this route.

#### The Union and Pacific Railway

This rail line connects New York on the Atlantic coast to San Francisco on the Pacific coast passing through Cleveland, Chicago, Omaha, Evans, Ogden and Sacramento. The most valuable exports on this route are ores, grain, paper, chemicals and machinery.

#### The Australian Trans-Continental Railway

This rail line runs West-East across the southern part of the continent from Perth on the West coast to Sydney on the East coast passing through Kalgoorlie broken hill and port Augusta. Another North-South line connects Adelaide and Alice spring and to be joined later to the Darwin-Birdum link.

#### **The Orient Express**

This line runs from Paris to Istanbul passing through Strasbourg, Munich, Vienna, Budapest and Belgrade. It has reduced the 10-day journey to only 4 days. Cheese, wine, bacon, oats, fruits and machinery are chief exports on this rail route.

#### **Water Transport**

This is the cheapest mode of transport as no construction cost is there and very little maintenance cost. The linking of oceans have brought greater navigation with ships of various sizes. Water transport is divided into sea routes and inland waterways.

#### 1. Sea Routes

Sea and oceans provide smooth highway traversable in all directions with no maintenance costs. Modem passenger ships and cargo ships are equipped with various navigation aids. The important sea routes are as follows:

- **North Atlantic Sea Route** It links North-Eastern USA and North-Western Europe. It is the busiest in the world and also called Big Trunk route.
- Mediterranean-Indian Ocean Sea Route This route connects industrialised Western Europe with West Africa, South Africa, South-East Asia, Australia and New Zealand. Natural resources such as gold, diamond, copper, tin, groundnut, oil palm, coffee and fruits are transported through it.
- Cape of Good Hope Sea Route This route links West Europe and West African countries with Brazil, Argentina and Uruguay in South America. Traffic is less on this route because the countries falling in this route have similar products and resources.
- The North Pacific Sea Route This route connects the ports on the West coast of North America with those of Asia. These are Vancouver, Seattle, Portland, San Francisco and Los Angeles of American side with Yokohama, Kobe, Shanghai, Hong Kong, Manila and Singapore of Asian side.
- The South Pacific Sea Route This route is used for reaching Hong Kong, Philippines and Indonesia and also links Western Europe and North America with Australia, New Zealand and Pacific Islands via the Panama Canal. Panama is 12000 km far from Sydney. Honolulu is an important port on this route.
- Coastal Shipping Coastal shipping is a convenient mode of transportation with long coastlines, e.g. USA, China and India. This type of shipping can reduce congestion on land routes.

#### **Shipping Canals**

There are two canals that serve as gateways of commerce for both the Eastern and Western worlds. They are:

• The Suez Canal Constructed in 1869, it is a man-made canal linking the Mediterranean sea and the Red sea. It is 160 km long and 11 -15 m deep without any locks and sea water flows freely through it.

• The Panama Canal It is a man-made canal linking Atlantic ocean with Pacific ocean. It is 72 km long and involves a deep cutting for a length of 12 km and has 6 locks. It shortens the distance between New York and San Francisco by 13000 km by sea.

## 2. Inland Waterways

Rivers, canals, lakes and coastal areas are inland waterways for the transportation of cargo and passengers. The development of inland waterways depends on navigability, water flow and transport technology. The important inland waterways are: The

- Rhine Waterways This waterway links the industrial areas of Switzerland, Germany, France, Belgium and the Netherlands with the North Atlantic sea routes. The river Rhine flows through Germany and Netherlands. It flows through a rich coal field, Dusseldorf is an important port in this region. This waterway is the world's most heavily used. More than 20,000 ocean-going ships and 200,0 inland vessels move from this waterways every year.
- The Danube Waterway The Danube river which is navigable upto Tauma Severin, emerges in the Black Forest. It is used mainly for the export of wheat, maize, timber and machinery.
- The Volga Waterway Volga is one of the developed waterways of Russia. It is navigable upto 11,200 km and drains into the Caspian Sea.

  It is connected to Moscow region and the Black Sea through Volga-Moscow canal and Volga-Don canal respectively.
- The Great Lakes-St Lawrence Seaway The Great Lakes alongwith estury of St Lawrence river form a waterway in North America. Duluth and Buffalo are two important ports on this route.
- **The Mississippi Waterways** The Mississippi-Ohio waterway links the interior part of USA with the Gulf of Mexico in the South. Large steamers can move upto Minneapolis.

## **Air Transport**

It is the fastest means of transport but it is very costly. Air transport has brought connectivity revolution in inhospitable deserts, mountainous regions and snow fields where other means of transport are not reachable. Due to high construction and maintenance cost, air transport is more developed in highly industrialised countries. Supersonic aircrafts cover the distance in very short time.

## **Inter- Continental Air Routes**

USA accounts for 60% of airways of the world. Important cities are nodal points where air routes converge or radiate to all continents. Africa, Asiatic part of Russia and South America lack air services, sparser population or limited landmass or low economic development.

## **Pipelines**

These are used to transport water, petroleum, natural gas, liquidified coal for an uninterrupted flow. Milk is supplied through pipelines in New Zealand. USA has dense network of pipelines. Big Inch is famous pipeline of USA that transports petroleum from the oil wells of the Gulf of Mexico to the North-Eastern states. In Europe, Russia, West Asia and India, oil wells are linked to refineries through pipelines.

#### **Communications**

Long distance communication in the form of telegraph and telephone are important. In mid-19th century, American Telegraph and Telephone company (AT&T) enjoyed monopoly. In developing countries the use of cell phones has gained importance for rural connectivity. Latest technology developments have resulted in Optical Fibre Cables (OFC). They allow large quantities of data to be transmitted that are virtually error free. Now the telecommunication merged with computers to form integrated networks termed as Internet.

### **Satellite Communication in India**

Artificial satellites are deployed in Earth's orbit to enhance communication and improve connectivity. This is satellite communication which has reduced the per unit cost and time of communication also.

India developed its own satellite Aryabhatta and launched it on 19th April, 1979, Bhaskar -I in 1979 and Rohini in 1980. Bhaskar, Challenger and INSAT-IB satellites are used for long distance communication and weather forecasting.

### **Cyber Space-Internet**

This is the latest technology in which there is instant connectivity by accessing the electronic computerised space. It is called cyber space or Internet and is encompassed by the World Wide Web (www).

Majority of Internet users are in USA, UK, Germany, Japan, China and India. The social and economic space has expanded through e-mail, e-commerce, e-leaming and e-governance.

## **Very Short Answer (2 marks)**

(1) What are the problems of road transport in mountainous, desert and flood prone regions? **Ans:** It is very difficult and expensive to construct and maintain roads in mountainous and desert areas. In flood prone regions, roads are not sustainable. The unmetalled roads become unmotorable during rainy season and even the metalled roads are washed away during flood. **(2)** What is a trans-continental railway?

**Ans:** Trans-continental railways connect two ends of the continent while running across it. Trans-Siberian railway and Trans-Canadian railway are two important trans-continental railways.

(3) What are the advantages of water transport?

**Ans:** Advantages of water transport are as follows:

- (i) The most important advantage of water transport is that the route construction is not required.
- (ii) It is also cheaper and energy efficient because of the less friction of water.
- (4) What are the significance of modes of transport

**Ans:** Significance of Modes of Transport

The significance of a transport depends upon factors such as types of goods and service to be transported, cost of transport and the availability of transport.

- Ocean freight transport carries international goods.
- Road transport carries goods and people over short distances and provides door to door services. It is cheaper and faster for these type of services. Railways are most suitable for large volume of bulky materials over long distances within a country.
- Airways are most suited for high value, light and perishable goods.

All these modes of transport complement each other in a well managed transport system. A

transport network is formed when several places (nodes) are joined together by a series of routes (links) to form a pattern.

#### (5) What is border roads?

**Ans: Border Roads:** These are the roads which are built along international boundaries. These are mainly built for defence purposes, to connect remote or inaccessible areas with cities and to transport goods to border villages and military camps.

## **(6)** What do you mean by Highways?

**Ans:** Highways: Highways are metalled roads that connect distant places. These are constructed for unobstructed flow of traffic. These are 80m wide and provide separate traffic lanes, bridges, flyovers and dual carriageways. In developed countries, every city and port town is linked through highways.

## (7) Classified the railway Gauges.

Ans: Railway gauges are generally classified across different countries as:

Broad gauge- more than 1.676 metre.

Metre gauge - 1 metre.

Narrow gauge - below 0.762 or 0.610 metre.

## (8) What are the advantages of Air transport?

**Ans:** Advantages of Air Transport Despite having some limitations, air transport is more advantageous in the modern world:

- Valuable cargo and perishable goods can be moved rapidly on a worldwide scale. The inaccessible areas have become accessible through this mode of transport. For example, the airplane brings varied articles to the Eskimos in Northern Canada unhindered (freely) by the frozen ground. Another example, is from the Himalayan region, where the routes are often obstructed due to landslides, avalanches or heavy snowfall. At such times, air travel is the only alternative to reach a place.
- Air transport has brought about a connectivity revolution in the world. Because of air transport, the travelling time is reduced to hours and minutes from years and months.
- Air transport has great strategic advantage as it can be used for military and tactical operations. The air strikes by U.S. and British forces in Iraq proves this fact.

## (9) What do you mean by communication?

**Ans:** Communication is the exchanging of information by speaking, writing or using some other means, e.g. Telephone, television, Satellites, Internet etc.

## (10) Define pipeline transport.

**Ans:** Pipelines: Pipeline transport is the transportation of goods or material through pipes. Pipelines have immense importance to uninterruptedly transport liquids and gases like water petroleum, natural gas, liquified coal, cooking gas or LPG, etc. In New Zealand, pipelines are also used to supply milk from farms to factories.

USA has a dense network of oil pipelines which runs from producing areas to the consuming areas. In USA about 17 per cent of all freight per tonne-km is carried through pipe lines. For examples:- Big Inch is a pipe lines which carries Petroleum from the oil wells of the Gulf of Mexico to the north eastern states.

(11) What do you mean by cyberspace or internet?

Ans: Cyberspace or Internet: Cyberspace or internet is the electronic digital world for communicating or accessing data information over computer networks without physical movement of the sender and receiver. It is encompassed by the World Wide Web (www). We can use cyberspace anywhere, for example, in office, sailing boats, aeroplanes, etc. We cannot measure the speed at which this electronic network has spread in human history. The cyber space exists everywhere from an office to a boat or an airplane.

(12) Distinguish between National Highways and State Highways.

## **Ans: National Highways:**

- They connect state capitals and big cities across the nation.
- They are managed and maintained by the Public Works Department under Central Government.
- These are important for the economy of the whole nation.
- In India, the total length of National Highways is 65.000 km.

## **State Highways:**

- They connect all the big cities within a particular state.
- They are managed and maintained by the Public Works Department under State Government.
- These are important for the economy of a particular state and surrounding regions.
- Total length of State Highways in India is about 1,32,000 km
- (13) What are the different roles played by pack animals in transportation in different parts of the world?

**Ans.** Pack animals are those animals which are used as a means of transportation. Some of the roles played by pack animals are

- In Western countries horses are used as a draught animal.
- Dogs and reindeers are used to draw sledges over snow covered area in North America, North Europe and Siberia.
- Camels are used in desert for caravan movement and bullocks carts in India.
- Mules are used in mountain areas for carrying people as well as goods.

# **Short Answer type Questions (3 Marks)**

**1.** Describe any three major problems of road transport in the world.

**Ans:** Road transport plays an important role in the economy of a country. But it faces various problems, which include:

- (i) During rainy days, the roads which are unmetalled are damaged seriously. Even unmetalled roads are washed away by floods, which results in breaking up the road network.
- (ii) The road transport system records heavy traffic. When roads cannot cope up with the demands of traffic on the road, roads are heavily congested.
- (iii) Huge amounts of money is required for construction and maintenance of roads which affects the quality of roads, mainly in developing countries. Road networks of the world are not fully developed.
- 2. Explain any three points of economic significance of Trans-Siberian railways.

**Ans:** The Trans-Siberian railways are a major rail route of Russia. It runs from St. Petersburg in the West to Vladivostok in the East on the Pacific coast.

It is significant for the economy in the following ways:

- (i) It has made it possible to link Asian markets with the European markets. Now goods can be easily transported between the two continents, which provide a boost to the economies of both continents.
- (ii) It connects various commercial centers in Europe and Asia and provides push to trade and commerce. For example, it runs through Ural Mountains and connects Chita (agro centre) to Irkutsk (fur centre).
- (iii) This railway network has improved connectivity towards its South by the L connecting links such as towards Odessa (Ukraine), Ulan Bator (Mongolia), Beijing (China) etc. Thus, the economies of these regions have also integrated by the 20 network.
- 3. Write any four advantages of rail transport

**Ans:** The four advantages of railways transport

- (i) It is a cheap mode of transport for carrying bulky goods and passengers over long distances in a country or within two continents.
- (ii) Rail transport connects the commercial centers of a country and provides a boost to the economy and industry in the country. For example, development of railways has supported mining and manufacturing in USA.
- (iii) the densely populated regions of the world, passenger trains carry millions of people to and from their work places. Thus, it is very important for commuting purposes in these regions.
- **4.** Write short note on the following ocean routes.

Ans: (i) North Atlantic Sea Route

- (ii) The South Atlantic Sea Route
- (i) The North Atlantic Sea Route connects the two industrially developed regions of the world which are North-Eastern USA and a North-Western Europe. It accounts for one-fourth of world's foreign trade. It is the busiest route in the world. The other name of this route is Big Trunk Route. This route has highly advanced ports and harbour facilities.
- (ii) The South Atlantic Sea Route links West European and West African countries with Brazil, Argentina and Uruguay in South America. There is limited development and population in South America and Africa. Hence, there is little traffic on this route. The traffic is very low on the route between Rio de Janeiro and Cape Town.
- **5.** Describe any three advantages of water transport in the world.

#### OR

Mention any six advantages of oceanic routes.

**Ans:** Advantages of water transport or oceanic routes are as follows:

- (i) There is no need to construct routes over To the oceans due to which the construction cost is saved.
- (ii) Because of the less friction of water as compared to land, it is much cheaper mode of transport.
- (iii) Compared to land and air, ocean transport is a cheaper means for carrying of bulky materials over long distances.
- (iv) Water transport is energy efficient.
- (v) It does not require maintenance.
- (vi) Oceans are linked with each other and the ship of various sizes can be accommodated.
- **6.** State any six characteristics of Suez Canal.

**Ans:** Six characteristics of Suez Canal are as follows:

- (i) Suez canal links Port Said in the North and Port Suez in the South connecting the Mediterranean Sea and the Red Sea.
- (ii) It greatly reduced the sea route distance between Liverpool and Colombo as compared to

the earlier Cape of Good Hope route.

- (iii) It has opened a new route to the Indian ocean for the Europeans, which improved trade and commerce.
- (iv) It has no locks and it is 160 km long and 11 to 15 m deep.
- (v) It is joined by a navigable freshwater canal from the Nile, which supplies freshwater to Port Said and Suez.
- (vi) A railway line runs along the canal, which connects other parts of region
- 7. Why is Rhine the world's most heavily used waterway? Explain any three reasons.

## OR

"The Rhine waterways is the world's most heavily used inland waterway'. In the light of this statement, examine the waterway significance.

**Ans**: The Rhine flows through Germany and the Netherlands. The reasons for the Rhine to be the world's most heavily used waterway are as follows:

- (i) The river Rhine is navigable for 700 km from Rotterdam in Netherlands to Basel in Switzerland.
- (ii) It flows through a rich coalfield which has made the whole region a prosperous manufacturing area.
- (iii) The waterway links the industrial areas of Germany, France, Switzerland, Belgium, wood Netherlands with North Atlantic sea routes
- (iv) The Ruhr river joins the Rhine from its East. There is movement of huge volumes of freight to the South of Ruhr River. More than 20,000 ships and 20,00,000 inland vessels exchange their cargoes annually in this region.
- **8.** Mention the famous oil pipeline of the USA. How are pipelines one of the most convenient modes of transport?

Ans: There is a dense network of oil pipelines in USA which run from the oil producing areas to consuming areas. One such famous pipeline is called Big Inch. It carries petroleum from the oil wells of the Gulf of Mexico to the North-Eastern states. Pipelines are one of the most convenient modes of transport as they are used extensively to transport liquids and gases such as water, petroleum, oil and natural gas. They can carry liquid and gaseous materials for a long distance without any interruption or delays. The pipelines directly link the producing areas to the consuming areas.

**9.** What is cyberspace? Describe any two advantages of Internet.

**Ans:** Cyberspace or internet refers to the electronic digital world that is used for communicating or accessing data information over computer networks without any physical movement of the sender and the receiver.

The cyberspace works within the World Wide Web (WWW) cyberspace can be accessed anywhere. For example in offices, at homes, in schools etc. In the last few years, it has expanded rapidly. The user base has shifted from the developed countries like to USA to less developed countries such as China and India. There were about 2 billion internet users in the world in 2010 AD.

The advantages of internet are:

- (i) It expands the social and economic space of people with the help of e-mail, e-commerce, e-learning, e-governance etc.
- (ii) Internet communication has connected more and more people across the world. It has made the concept of global village a reality.

## **Long answer type questions (5 Marks)**

**1.** Describe the journey of development of land transport from the days of humans a carriers and the cable ways of today.

**Ans :** Land transport is an important and useful mode of transport.

In older days, human and animals were important carriers. For example, Palanquin (palki/doli) was used to carry brides by four persons (Kahars in North India).

Later, animals were used as means of transport. For example, mules, horses, camels, oxen, etc were used in rural areas. With the invention of the wheel, the use of carts and wagons became important.

The 18th century marks the revolution in transport which came about only after the invention of the steam engine.

In the 19th century, railways became the most popular and fastest form of transport with the opening of the first public railway line in 1825 between Stockton and Darlington in Northern England.

In USA, the development of railways also facilitated commercial grain farming, mining and manufacturing in the continental interiors of the country.

On the other hand, the invention of the internal combustion engine revolutionised road transport in terms of road quality and vehicles (motor cars and trucks) flying over them.

The newer forms of land transportation have emerged in recent times. It includes are pipelines, ropeways and cableways. These are faster and more efficient as compared other means of transport..

**2.** 'Trans-Canadian railway line is considered as the economic artery of Canada.' Support the statement with suitable examples.

#### OR

Which is the longest trans-continental railway of North America? Describe its any four features.

#### OR

Describe the significance of 'Trans-Canadian Railway'.

**Ans:** The longest trans-continental railway line in North America is Trans-Canadian Railway line. It covers a distance of 7050 km, running from Halifax in the East to Vancouver on the Pacific Coast.

The Trans-Canadian railway line is considered the economic artery of Canada due to the following reasons

- (i) It connects the important industrial cities of Montreal, Ottawa. Winnipeg and Calgary. Goods and people can be easily transported to and from these economic centres with the railways
- (ii) It connects Quebec-Montreal industrial region with the wheat but of Prairie region. Thus, raw materials and finished products are transported with these railways.
- (iii) The line also connects the Coniferous forest region in the North to the Quebec Montreal and the Prairies. All these regions have become complementary to each other and they support economic activities.
- (iv) A loop line from Winnipeg to Thunderbay (Lake Superior) connects this rail line with one of the most important waterways in the world. This is used for exporting various products

3. Name the longest trans-continental railway of the world. Describe it's any four features.

#### OR

Describe the significance of "Trans-Siberian' Railway.

**Ans:** Trans-Siberian railway is the longest trans-continental railway of the world. The Trans-Siberian railways runs from St. Petersburg are the West to Vladivostok the Pacific coast in the East. It is Asia' most important route.

Significance of the Trans-Siberian railways are as follows:

It connects various important commercial and industrial centres such as Moscow, Ufa, Irkustsk, Chita etc. These centres are important for the economy of the region.

In Asia, it is the longest as well as double tracked and electrified railways. Due to this, it is possible to link Asian and European markets.

This railway line has connecting links further Les sth Southwards. It connects Odessa in Ukraine, Baku on the Caspian Coast, Tashkent in Uzbekistan etc.

This railway line is important for trade and commerce between the continents of Asia and Europe. It provides integration of both continents in terms of their economy and society.

**4.** Which means of transport is extensively used for carrying water, petroleum, natural gas and other liquids? Describe the network of this means of transport in the world.

#### OR

Name the principal mode of transportation in the world which is used for carrying liquid and gaseous materials only. Mention any four characteristics of this mode of transportation.

### OR

Analyze any five points of importance of 'pipelines' as means of transportation.(Delhi 2019)

**Ans:** The means of transport used extensively for carrying water, petroleum, natural gas and other liquids is pipeline transport. Pipelines have the following characteristics:

- (i) It is most convenient and efficient means of transporting liquids and gases over long distances
- (ii) Pipelines can also transport solids after converting them into slurry (wet mixture).
- (iii) Its initial set up cost is high, but after that, pipelines transport liquids and gases very cheaply.
- (iv) It does not require much space.
- (v) Pipelines are energy efficient and environment friendly.

Pipeline Network in the World

Pipeline network can be found in the following regions:

- In New Zealand, pipelines are also used to supply milk from farms to factories.
- USA has a dense network of oil pipelines which runs from producing areas to the Consuming areas.
  - In USA, about 17 per cent of all freight per tonne-km is carried through pipelines.
  - In many parts of the world like Europe, Russia, West Asia and India pipelines are used to connect oil wells to refineries, and to ports or domestic markets. Pipelines are expanding very fast.

For example, Turkmenistan in Central Asia has extended pipelines to Iran and also to parts of China

• The proposed Iran-India via Pakistan international oil and natural gas pipeline will be the longest in the world.

**5.** Explain the significance of each of the transport and communication services available in the world.

Ans: Significance of various transport services are as follows:

**Road Transport:** It is cheaper and faster mode of transport over short distance and for door-to-door services.

Railways: It is best suited for bulky goods and passengers for long distances.

**Water Transport:** It is the cheapest mode of transport because of less friction of water. Ocean routes are cheaper for carrying of bulky material from one continent to another.

**Air Transport:** It is the fastest means of transportation. It is best suited for long distance travel and worldwide transportation of valuable cargo.

**Pipelines**: It is used to carry liquids and gases from the producing areas to the consuming areas.

## Significance of various communication services are as follows:

**Satellite Communication**: In contemporary, world, satellite communication has become very important with Internet as the largest electronic network on the planet connecting about 1000 million people in more than 100 countries.

**Cyber Space-Internet**: This electronic network der has spread rapidly. The number of users has increased from 400 million in 2000 AD to over two billion in 2010. It has brought people from different parts of world closer to each other.

## **SOURCE BASED QUESTIONS (3 Marks)**

## 1. Read the following passage carefully and answers the questions that follow.

Most of the movement of goods and services takes place over land. In early days, humans themselves were carriers. Later animals were used as beasts of burden. With the invention of the wheel, the use of carts and wagons became important. The revolution in transport came about only after the invention of the steam engine in the 18th century. Perhaps the first public railway line was opened in 1825 between Stockton and Darlington in Northern England and then onwards, railways became the most popular and fastest form of transport in the 19th century. It opened up continental interiors for commercial grain farming, mining and manufacturing in U.S.A. The invention of the internal combustion engine revolutionised road transport in terms of road quality and vehicles (motor cars and trucks) plying over them. Among the newer developments in land transportation are pipelines, ropeways and cableways. Liquids like mineral oil, water, sludge and sewers are transported by pipelines. The great freight carriers are the railways, ocean vessels, barges, boats and motor trucks and pipelines. In general, the old and elementary forms like the human porter, pack animal, cart or wagon are the most expensive means of transportation and large freighters are the cheapest. They are important in supplementing modern channels and carriers which penetrate the interiors in large countries. In the densely populated districts of India and China, overland transport still takes place by human porters or carts drawn or pushed by humans

(i) What of these was the most popular form of transport in 19th century?

**Ans** Railways

(ii) What of the following technology revolutionised road transport?

Ans . Internal Combustion Engine

(iii) Pipelines can be used to transport which of the following

Ans .All of these

(iv) Which type of transport can be used to provide connectivity to interior of the countries?

**Ans** . Roadways

## 2. Read the following passage and answer the questions that follow.

One of the great advantages of water transportation is that it does not require route construction. The oceans are linked with each other and are negotiable with ships of various sizes. All that is needed is to provide port facilities at the two ends. It is much cheaper because the friction of water is far less than that of land. The energy cost of water transportation is lower. Water transport is divided into sea routes and inland waterways.

Rivers, canals, lakes and coastal areas have been important waterways since time immemorial. Boats and steamers are used as means of transport for cargo and passengers. The development of inland waterways is dependent on the navigability width and depth of the channel, continuity in the water flow, and transport technology in use. Rivers are the only means of transport in dense forests. Very heavy cargo like coal, cement, timber and metallic ores can be transported through inland waterways. In ancient times, riverways were the main highways of transportation as in the case of India. But they lost importance because of competition from railways, lack of water due to diversion for irrigation, and their maintenance. poor The significance of rivers as inland road D HIS waterways for domestic and international transport and trade has been recognised throughout the developed world. Despite inherent limitations, many rivers have been modified to enhance their navigability by dredging, stabilising river banks, and building dams and barrages for regulating the flow of water. The following river waterways are some of the world's important highways of commerce

(i) What is the most important advantage of water transport?

Ans:- It does not require route construction

(ii) What of the following has led to decline in waterway transport?

Ans:- Competition from railways, Diversion of rivers, Poor maintenance of waterways

(iii) What of the following transport is used in navigating the dense forests?

**Ans:-** River ways

(iv) What of these can be transported by inland waterways?

Ans:- Metallic Ores, Timber, Cement

## 3. Read the following passage carefully and answer the questions.

Air transport is the fastest means of transportation, but it is very costly. Being fast, it is preferred by passengers for long-distance travel. Valuable cargo can be moved rapidly on a world-wide scale. It is often the only means to reach inaccessible areas. Air transport has brought about a connectivity revolution in the world. The frictions created by mountainous snow fields or inhospitable desert terrains have been overcome. The accessibility has increased. The airplane brings varied articles to the Eskimos in Northern Canada unhindered by the frozen ground. In the Himalayan region, the routes are often obstructed due to landslides, avalanches or heavy snow fall. At such times, air travel is the only alternative to reach a place. The manufacturing of aircrafts and their operations require elaborate infrastructure like hangars, landing, fuelling, and maintenance facilities for the aircrafts. The construction of airports is also very expensive and has developed more in highly ONE industrialized countries where there is a large volume of traffic. At present no place in the world is more than 35 hours away. This startling fact has been made possible due to people who build and fly airplanes. Travel by air can now be measured by hours and minutes instead of years and months. Frequent air services are available to many parts of the world. Although, U.K. pioneered the use of commercial jet transport, U.S.A. developed largely post-War international civil aviation. Today, more than 250 commercial airlines offer regular services to different parts of the world. Recent developments can change the future course of air transport. Supersonic aircraft cover the distance between London and New York within three and a half hours.

(i) What of the following is the advantage of Air transport?

**Ans** It can reach inaccessible areas

(ii) Travel time within continents can be reduced to a few hours with the help of which of the following technology?

**Ans** Supersonic Jets

(iii) Airways have developed mainly in which of the following countries?

Ans Developed countries

(iv) Airways can be used to reach which of the following areas?

**Ans** The Andes, The Himalayas, Inhospitable deserts

# Mineral and Energy Resources

## **Types of Mineral Resources**

Mineral are classified on the basis of their physical and chemical properties which are as follows:

### **Metallic Minerals**

These minerals are rich in metals e.g. copper, bauxite, iron, manganese, etc. These are of two types:

- Ferrous Minerals These are rich in iron contents and an important source of iron.
- **Non-Ferrous Minerals** These do not have iron content and have highest proportion of other metals. For e.g. copper, bauxite, etc.

## **Non-Metallic Minerals**

These minerals do not have contents of metals. They are classified into two groups:

- **Organic Minerals** These are made up of organic matter of buried animal and plants. For e.g, coal, petroleum.
- **Inorganic Minerals** These are inorganic in nature of origin. For e.g. Mica, limestone, graphite, etc.

## **Characteristics of Minerals Resources**

The main characteristics of minerals are as follows:

- 1. Their distribution over the earth surface are uneven.
- 2. There is inverse relationship in quantity and quality of minerals i.e. good quality minerals are less in quantity as compared to low quality minerals.
- 3. Minerals are exhaustible. Once they used can not replenished immediately at the time of need. So, minerals have to be conserved and used judiciously.

### **Distribution of Minerals in India**

- Most of metallic minerals in India occur in the Peninsular Plateau region in the old crystalline rocks.
- River valleys of Damodar, Sone, Mahanadi and Godavari have over 97% of coal reserves in India.
- Sedimentary basins of Assam and offshore region in the Arabian Sea (Gujarat and Mumbai High) are famous for their crude petroleum reserves.
- New reserves of petroleum also have been found in the basins of Krishna-Godavari and Kaveri.
- Most of the major mineral resources occur to the east of a line linking Mangalore and Kanpur.
- Minerals are generally concentrated in three broad belts in India.
   There may be some sporadic occurrences here and there in isolated pockets. These belts are:

## The North-Eastern Plateau Region

- This belt includes the regions of Chotanagpur (Jharkhand), Odisha Plateau, West Bengal and parts of Chhhattisgarh.
- Important minerals are iron ore, coal, manganese, bauxite and mica.
- Due to availability of these minerals, most of the iron and steel industries are located here.

## The South-Western Plateau Region

- This belt extends to lower Karnataka, Goa and contiguous uplands of Tamil Nadu and Kerala.
- Ferrous metals and bauxite are concentrated here along with high grade iron ore, manganese and limestone. This belt is rich in coal packs except nevveli lignite.
- Neyveli has lignite coal deposit. Deposits of monazite sand and thorium are found in Kerala.
- Mines of iron-ore are located in Goa.

## **The North-Western Regions**

- Minerals of this belt are associated with Dharwar system of rocks which are found in the Rajasthan and parts of Gujarat.
- Major minerals are copper and zinc. Rajasthan is rich in building stones i.e. sandstone, granite, marble, fuller's earth and gypsum.
- Some cement industries are also concentrated here due to availability of dolomite and limestone which are the raw materials of these industries.
- Gujarat is rich in petroleum deposits. Salt is also produced in Gujarat and Rajasthan.

## **Other Areas/Regions**

- Both Eastern and Western parts of the Himalayan belt have minerals like copper, lead, zinc, cobalt and tungsten.
- Assam Valley has mineral oil deposits. Besides, oil resources are also found in off-shore areas near Mumbai Coast (Mumbai High).

## **Spatial Pattern of Metallic Minerals**

Spatial pattern of some of the important minerals are as follow:

#### **Ferrous Minerals**

- India is well placed in respect of ferrous minerals like iron-ore, manganese, chromite, etc.
- These minerals provide a strong base for the development of metallurgical industries.

### Iron ore

India has largest iron ore reserves in Asia. Its superior quality of hematite and magnetic ironore have a great demand in International market. Iron ore mines of India are found near the coal fields of North-Eastern Plateau region which is an advantage for iron-ore industries of India. During 2004-05, India has about 20 billion tonnes of iron-ore reserves. Few Indian states have about 95% of total iron-ore reserves in India.

These states are:

- Odisha The important mines are located at Sundergarh, Mayurbhanj and Jhar. Gurumahisani, Sulaipet, Badampahar in Mayurbhanj and Kiruburce and Bonai (Sundergarh) have important mines. Jharkhand It has oldest mines in India. Important mines are Noamundi and Gua in Poorbi and Paschimi Singhbhum districts.
- **Chhattisgarh** The mine belt further extended to Durg, Dantewada, Bailadiala, Dalli and Rajhara.
- **Karnataka** Important mines are Sundar-Hospet area of Bellary distict, Baba Budan hills and Kundremukh in Chikmogalur Tumkur districts,
- **Maharashtra** Important iron-ore deposits are located in Chandrapur, Bhandara and Ratnagiri districts.
- Andhra Pradesh Important areas of iron ore are Karimnagar Warangal, Kumool, Cuddapah and Anantpur districts.
- Others These include Salem and Nilgiris Districts of Tamil Nadu state and Goa state.

## Manganese

It is an important raw material which is used in iron and steel industry for smelting of ironore and in the manufacturing of ferro alloys.

It is mainly associated with Dharwar system but found almost in all geological formations. Important states are:

- Odisha It is the largest manganese producer of India. The central part of the iron-ore belt of India has most of the manganese mines of Odisha. Important mines are located in the districts of Bonai, Kendujhar, Sundargarh, Gangpur, Koraput, Kalahandi and Bolangir.
- **Karnataka** Dharwar, Bellary, Belgaum, North Canara, Chikmagalur, Shimoga, Chiradurg and Tumkur.
- **Maharashtra** The main disadvantage of its mines are that these are located away from iron and steel plants. Nagpur, Bhandara and Ratnagiri have manganese mines.
- Madhya Pradesh Balaghat, Chhindwara, Nimar, Mandla and Jhabua districts have manganese mines.
- Others Other producer states of manganese are Andhra Pradesh, Goa and Jharkhand.

### **Non-Ferrous Minerals**

India has large deposits of bauxite but is lacking behind in other non-ferrous minerals.

### **Bauxite**

It is the ore that used to manufacture aluminum and aluminium products.

It is found in laterite rocks mostly in the plateau or hilly regions of peninsular India and also in the coastal areas. Important states are:

- **Odisha** It is the largest producer of bauxite and important producing areas are Kalahandi, Sambalpur, Bolangir and Koraput.
- **Jharkhand** Pelands of Jharhand in Lohardage home rich deposits.
- Gujarat Bhavanagar and Jamnagar are important sites of bauxite.

- Chattisgarh Amarkanatak plateau region has large deposits of bauxite.
- Madhya Pradesh Katni-Jabalpur and Balaghat have important deposits of bauxite.
- Others Tamil Nadu, Karnataka and Goa are other producers of bauxite.

## Copper

It is alloyable, malleable and ductile and an indispensable metal in electrical industry used for making wires, electric motors, transformers and generators.

It is also used to give strength in gold jewelleries. Important copper producing states are:

- **Jharkhand** Singbhum district
- Madhya Pradesh Balaghat
- Rajasthan Jhunjhunu and Alwar
- Andhra Pradesh Agnigundala in Guntur district
- Karnataka Chitradurg and Hasan
- Tamil Nadu South Arcot district

#### **Non-Metallic Minerals**

Limestone, dolomite, phosphate and mica are some non-metallic minerals produced in India. Mica is the important among them while others are produced for domestic consumption.

#### Mica

Mica is mainly used in the electrical/electronic industries which can be split into very thin, strong and flexible sheets.

Due to its resistance quality it is used in electricals and electronic industry. Important producer states are:

- **Jharkhand** Hazaribagh plateau produces a high quality of mica.'
- **Andhra Pradesh** Nellore district is important producer of mica, it produces best quality mica.
- Rajasthan A 320 km long belt from Jaipur to Bhilwara near Udaipur produces mica.
- Karnataka Mysore and Hasan are important producers of mica.
- Others Coimbatore, Tiruchirapalli, Madurai and KanyaKumari (Tamil Nadu), Ratnagiri(Maharashtra), Alleppey, (Kerala), Purulia and Bankura (West Bengal) are also known for mica deposits.

## **Energy Resources**

All sectors of economy i.e. agriculture, industry, transport are run by power which comes from mineral fuels whether conventional or non-conventional energy resources.

## **Conventional Sources of Energy**

These are exhaustible in nature e.g. fossil fuels like coal, petroleum and natural gas.

#### Coal

- It is required in the generation of thermal power and smelting of iron-ore.
- India has about 80% of bituminous coal which is of non-cooking grade.
- It is found in two rock sequences i.e. Gondwana coal fields and tertiary coal fields.

### **Gondwana Coal Fields**

Damodar Valley is the important coal field of India. Jharkhand and West Bengal coal have the entire area of this coal field. Jharia (largest coal field), Raniganj (second fields largest), Bokaro, Giridih, Karanpura are important coal fields of this valley. Other river valleys are Godavari, Mahanadi and Sone.

## **Tertiary Coal Fields**

Important states are:

Meghlaya Darangiri, Cherrapunji, Mewlong and Langrin (Meghalaya).

Assam Makum, Jaipur and Nazira in Upper Assam.

**Arunachal Pradesh** Namchik-Namphurk Jammu and Kashmir Kalakot Others Nagaland state

#### **Other Coal Fields**

Besides, the brown coal or lignite coal occurs in the coastal areas of Tamil Nadu, Puducherry, Gujarat and Jammu and Kashmir.

### **Petroleum**

Crude petroleum consists of hydrocarbons of liquid and gaseous states varying in chemical composition, colour and specific gravity. It is used as a source of energy in all internal combustion engines of automobiles, railways and aircrafts. It is also used as a raw material in petrochemical industries to produce fertilizer, synthetic rubber, synthetic fibre, medicines, vaseline, lubricants, wax soap and cosmetics, etc.

It is also called liquid gold due to the scarcity and different uses. Crude oil is found in sedimentary rocks of tertiary age. Before independence, Digboi was the only crude oil producing region in India but after independence in 1956, Oil and Natural Gas Commission was set up.

Important oil producing regions are:

- **Assam** Digboi, Naharkatiya and Moran.
- **Gujarat and Mumbai High** Ankaleshwar, Kalol, Mehasana, Nawagam, Kosamba and Lunej. Krishna, Godavari and Kaveri basin also have Oil and Natural Gas reserves on the East coast of India.

There are two types of oil refineries in India:

- **Field Based Refineries** Digboi is an example of field based refinery.
- **Market Based Refineries** Barauni is an example of market based refinery. There are total 21 refineries as on June 2011.

## **Natural Gas**

- It occurs along with oil as well as separately in gas reserves in India.
- These gas reserves are located alongwith Eastern cost of Tamil Nadu, Odisha, Andhra Pradesh, Tripura, Rajasthan, Gujarat and Maharashtra.
- Gujarat and Maharashtra have off-shore wells of natural gas.
- According to a survey report, there are indications of huge gas reserves in Ramathanpuram in Tamil/Nadu state.

## **Non-Conventional Energy Sources**

- Unlike conventional sources of energy, non-conventional energy sources are renewable i.e. solar, wind, hydro-geothermal and biomass and are not threat to natural system.
- Their use ensure sustainable development as these are environment friendly and cheaper energy sources.

## **Nuclear Energy Sources**

- Nuclear energy has emerged as a feasible source in recent times.
- Uranium and thorium are main minerals that are used to generate nuclear energy.

## **Uranium Deposits in India**

It is found in Dharwar rock system. Important regions are:

- **Jharkhand** Singbhum (alongwith the copper belt)
- Rajasthan Udaipur, Alwar, Jhunjhunu districts.
- Chhattisgarh Durg district Maharastra Bhandara district.
- Himachal Pradesh Kullu district.

## **Thorium Deposits in India**

It is found in very few places in India:

- Kerala (in monazite and ilmenitte beach sands) Plakkad and Kollam districts.
- Andhra Pradesh Vishakhapatnam.
- Odisha Mahanadi river delta

These three states have world's richest monazite deposits. The development of nuclear energy was started after establishment of Atomic Energy Institute at Trombay in 1954 which was renamed as the Bhabha Atomic Research Centre in 1967. Tarapur (Maharashtra), Rawatbhata near Kota (Rajasthan), Kalapakkam (Tamil Nadu), Narora (Uttar Pradesh), Kaiga (Karnataka) and Kakarapara (Gujarat) are other nuclear power sites in India.

## **Solar Energy**

- Sun's energy trapped by two methods i.e. photovoltaic cells and solar thermal technology and convert into electricity is called solar energy.
- Its construction is easy, eco-friendly and cost competitive.
- It is 7% and 10% more effective than coal and oil based plants and nuclear energy, respectively.
- Heaters, dryers, cookers and other heating appliances use solar energy more than others.
- Gujarat, Rajasthan and the Western part of India have higher potential for the development of solar energy.

## **Wind Energy**

• Wind energy is non-polluting and renewable source. Through turbine mechanism, kinetic energy of wind can be directly converted into electrical energy.

- Electricity can be produced by permanent wind systems like trade wind, westerlies or seasonal winds like monsoon winds. Besides, production of electricity can also be done by local winds, land and sea breezes.
- India already has started generating wind energy to lessen the burden of oil import bill. It is
  - estimated that India has 50000 megawatts potential of wind generation, of which one-fourth may be easily employed.
- Rajasthan, Gujarat, Maharashtra and Karnataka have higher potential for the development of wind energy.

## **Tidal and Wave Energy**

- Ocean currents are the store house of infinite energy. Large tidal waves are known to occur along the west coast of India.
- Many efforts for the efficient use of oceanic tides and waves were made since 17th and 18th century.
- But these waves have not yet been utilised properly because of lack of technology'. Geothermal Energy
- Magma that comes over the earth' surface releases vast amount of heat. This heat energy can be converted into electrical energy by tapping it. It is called

## **Geothermal energy**

- Main sources of this energy are magma, hot spring (hot water), hot geysers, etc.
- Geothermal energy is gaining importance and can be used as an alternative to conventional energy sources.
- In India at Manikaran in Himachal Pradesh, a geothermal energy plant has been commissioned.

## **Bio-Energy**

- Bio-energy refers to energy derived from biological products which includes agricultural residues, municipal, industrial and other wastes.
- It can be converted into electricity or electrical energy, heat energy or gas for cooking food.
- This can also solve the problem of garbage and waste in urban areas because energy can also be derived from these.
- It can contribute in improving economic life of rural peoples in developing countries, increasing environmental problems like pollution, solid waste management, enhancing self-reliance and reducing pressure on fuel wood.
- A project in OKHLA (Delhi) is an example that generates energy from municipal waste.

## **Conservation of Mineral Resources**

There are some methods through which we can conserve mineral resources:

- 1. Adoption of renewable resources in place of exhaustible resources like solar power, wind, geothermal energy can save our non-renewable resources.
- 2. Use of recycle scrap metals should be encouraged.

- 3. Use of substitutes for scarce metals may also reduce their consumption.
- 4. Export of strategic and scarce minerals must be reduced, so that the existing reserve may
- 5. be used for a longer period.

# SN. VERY SHORT AND ANSWER 1 "Most of the major mineral resources occur to the east of a line linking Mangaluru and Kanpur." Examine the statement. Answer-Distribution of minerals in India Most of the major mineral resources occur to the east of a line linking Mangaluru and Kanpur. Minerals are generally concentrated in three broad belts in India. **North-Eastern Plateau Region** This belt covers Chhotanagpur (Jharkhand), Odisha Plateau, West Bengal and parts of Chhattisgarh. It has variety of minerals viz. iron ore coal, manganese, bauxite, mica. The South-Western Plateau Region This belt extends over Karnataka, Goa and contiguous Tamil Nadu uplands and This belt is rich in ferrous metals, bauxite, Manganese and Limestone. It lacks coal deposits except Neyvelilingnite. The North-Western Region This belt extends along Aravali in Rajasthan and part of Gujarat and minerals are associated with Dharwar system of rocks. Copper, Zinc, Sandstone, Granite, Marble, Gypsum and Petroleum etc. are found abundantly. 2 Explain the use and distribution of Manganese in India. Answer-Manganese Odisha is the leading producer of Manganese. Major mines are located in Bonai, Kendujhar, Sundergarh, Gangpur, Koraput, Kalahandi and Bolangir. Karnataka is another major producer and here the mines are located in Dharwar, Ballari, Belagavi, North Canara, Chikkmagaluru, Shivamogga, Chitradurg and Tumakuru. Nagpur, Bhandara and Ratnagiri districts are important producers in Maharashtra. The manganese belt of Madhya Pradesh extends in a belt in Balaghat-Chhindwara-Nimar-Mandla and Jhabua districts. Telangana, Goa, and Jharkhand are other minor producers of manganese. Explain the use and distribution of Bauxite in India. 3 Answer-**Bauxite** Bauxite is raw material of Alluminium. It is found mainly in peninsular and coastal tracts of the country. Odisha is the largest producer of Bauxite. Kalahandi, Sambalpur, Bolangir and Koraput are important producers. Chhattisgarh has bauxite deposits in Amarkantak plateau while Katni Jabalpur area and **Balaghat** in M.P. have important deposits of bauxite. Kolaba, Thane, Ratnagiri, Satara, Pune and Kolhapur in Maharashtra are important producers. Tamil Nadu, Karnataka and Goa are minor producers of bauxite. Explain the use and distribution of Copper in India.

### Answer-

## Copper

- Copper is an indispensable metal in the electrical industry for making wires, electric motors, transformers and generators.
- The Copper deposits mainly occur in Singhbhum district in Jharkhand, **Balaghat** district in Madhya Pradesh and Jhunjhunu and Alwar districts in Rajasthan.
- Also found in Guntur district in Andhra Pradesh, Chitradurg and Hasan districts in Karnataka.
- 5 Describe the distribution of Petroleum in India

#### Answer-

#### **Petroleum**

- Crude petroleum consists of hydrocarbons of liquid, is an essential source of energy for all automobiles, railways, aircrafts etc.
- There are many bi-products are of it such as synthetic rubber, synthetic fiber, medicine, Vaseline, lubricants, wax, soap and cosmetics.
- Crude petroleum occurs in sedimentary rocks of the tertiary period.
- Oil and Natural Gas Commission was set up in 1956.
- In Assam, Digboi, Naharkatiya, Hugrijon and Moran are important oil producing areas.
- In Gujarat, Kalol, Mehsana, Nawagam, Kosamba and Lunej are important oil producing areas.
- Mumbai High which lies 160 km off Mumbai, an offshore producing site.
- Oil and Natural gas have been found in Krishna-Godavari and Kaveri basin.
- There are two types of oil refinery. Field based Digboi and Market based Barauni.
- 6 Describe the distribution of Coal in India

#### Answer-

### Coal

- Coal occurs in rock sequences mainly of two geological ages, namely Gondwana and tertiary deposits. Mainly used in thermal power generation and smelting of iron ore.
- About 80 per cent of the coal deposits in India is of bituminous type and is of non-coking grade.
- Over 97 per cent of coal reserves occur in the valleys of Damodar, Sone, Mahanadi and Godavari.
- Raniganj, Jharia, Bokaro, Giridih, Karanpura are important coal fields in Jharkhand. Jharia is the largest coal field followed by Raniganj.
- The most important coal mining centres are Singrauli in Madhya Pradesh, Korba in Chhattisgarh, Talcher and Rampur in Odisha, Chanda- Wardha, Kamptee in Maharashtra and Singareni in Telangana.
- Tertiary coals occur in Assam, Arunachal Pradesh, Meghalaya and Nagaland.
- Lignite occur in coastal areas of Tamil Nadu.
- 7 Describe the distribution of Natural Gas in India

### Answer-

## Natural Gas.

• The Gas Authority of India Limited was set up in 1984 as a public sector undertaking to transport and market natural gas.

- It is obtained along with oil in all the oilfields.
- Exclusive reserves have been located along the eastern coast as well as (Tamil Nadu, Odisha and Andhra Pradesh), Tripura, Rajasthan and off-shore wells in Gujarat and Maharashtra.
- 8 What do you know about the non-conventional sources of energy?

#### $\cap$ R

"The Non-Conventional sources of energy in India will provide more sustained and environment friendly energy" Examine the statement.

#### OR

"Non-Conventional sources of energy will provide more sustained, eco-friendly and cheaper energy if the initial cost is taken care of." Examine the statement.

#### Answer-

## **Non-Conventional Source of Energy**

- Sustainable energy resources are only the renewable energy sources like solar, wind, hydro-geothermal and biomass.
- These energy sources are more equitably distributed and **environment-friendly.**
- The non-conventional energy sources will provide more sustained eco-friendly cheaper energy after the initial cost is taken care of.
- 9 "Conservation of mineral resources is essential for the development of India". Examine the statement.

#### Answer-

### **Conservation of Minerals Resources**

- Improvising the technology so that low-grade ores can be used profitably.
- By re-using, improving, and recycling methods, materials can be manufactured from minerals, and by replacing other materials as well.
- People can conserve mineral resources by utilizing renewable resources. For example, using hydroelectricity, wind, wave, geothermal energy and solar power as sources of energy may conserve mineral resources such as coal.
- Use of scrap is specially significant in metals like copper, lead and zinc in which India's reserves are meagre.
- Export of strategic and scarce minerals must be reduced, so that the existing reserve may be used for a longer period.
- Sustainable development calls for the protection of resources for the future generations.
- 10 Explain in any five points about Nuclear Energy Resource.

#### Answer-

- Uranium and Thorium are important minerals for this energy. Uranium deposits occur in the Dharwar rocks.
- Uranium found along with Singhbhum copper belt. In Rajasthan Udaipur, Alwar and Jhunjhunu districts.
- Uranium also found in Durg district of Chhatisgarh, Bhandara district in Maharashtra.
- Thorium is mainly obtained from monazite and ilmenite in the beach sands along the coast of Kerala and Tamil Nadu.
- World's richest monazite deposits occur in Palakkad and Kollam districts of Kerala, near Vishakhapatnam in Andhra Pradesh and Mahanadi river delta in Odisha.

Atomic Energy Commission was established in 1948.
 The important nuclear power projects are Tarapur (Maharashtra), Rawatbhata near Kota (Rajasthan), Kalpakkam (Tamil Nadu), Narora (Uttar Pradesh), Kaiga (Karnataka) and Kakarapara (Gujarat).

# **Planning and Sustainable Development in Indian Context**

## **Approaches of Planning**

There are two approaches of planning which are as follows:

- **Sectoral Planning Approach** In this approach, the development of various sectors of economy, e.g. agriculture, irrigation, manufacturing, power, construction, transport, communication, social infrastructure and services, etc, are are taken into consideration to which various sets of schemes or programmes are to be formulised and implemented.
- **Regional Planning Approach** In this approach, the main emphasis is on to draw such plans which may help to reduce regional disparities and bring uniform economic development.

## **Target Area Planning**

The core focus of planning process is in promoting economically backward areas. It is important that for proper economic development of a region, there is a need of resource base as well as technology and investment simultaneously, because sometimes resources rich regions also remain backward.

After having about one and half decade planning experience, it is realised that our economic development is still facing the regional imbalances. In order to encounter both regional and social disparities, the Planning Commission introduced the 'Target area' and 'target group approaches' to planning.

Some of the programmes which are directed towards the development of these two approaches are as follows:

## **Target Area Programmes**

Target area has the following programmes such as:

- 1. Command Area Development programme
- 2. Drought Prone Area Development Programme
- 3. Desert Development Programme
- 4. Hill Area Development Programme

# **Target Group Programmes**

Target groups has the following programmes such as:

- 1. The Small Farmers Development Agency (SFDA)
- 2. Marginal Farmers Development Agency (MFDA)

In the Eighth Five Year Plan, hill areas, North-Eastern states, tribal areas and backward areas were taken into consideration in order to develop special area programmes.

Planning Related to Area Development Programme Hill Area Development Programme

- It covers 15 districts comprising all the hilly districts of Uttar Pradesh (present Uttarakhand), Mikir hill and North Cachar hills of Assam, Darjiling district of West Bengal and Nilgiri district of Tamil Nadu. It was stated in Fifth five year plan.
- It was recommended in 1981, by the National committee on the Development of Backward Area, that the hill areas having a height above 600 m and not covered under tribal sub-plan be treated as backward hill areas.

The aims of Hill Area Development Programmes are as follows:

- 1. Development of horticulture, plantation agriculture, animal husbandry, poultry, forestry and small scale and village industry were the main objectives of the programme through which exploitation of local resources may become possible.
- 2. The detailed plans were based on topographical, ecological, economic and social conditions of the hill areas.

## **Drought Prone Area Programme (DPAP)**

This programme was started during the Fourth Five Year Plan. The main objectives of Drought Prone Area Programme are as follows:

- 1. This plan mainly emphasised on generating employment opportunities to the people of drought prone areas along with creating productive assets.
- 2. Besides, irrigation projects, land development programmes, afforestation, grassland development and creation of basic rural infrastructure such as rural electrification, roads, market, credit and services were also its main priorities.
- 3. The National Committee on Development of Backward Areas found that this programme was mostly confined to the development of agriculture and allied sectors along with restoration of ecological balance.
- 4. The society due to burden of population was bound to utilise the marginal lands for agriculture and as a result led ecological degradation.

Thus, it was observed that there is an urgent need to generate alternative employment opportunities in these regions.

## **Drought Prone Regions**

- There are 67 districts (entire or partly) in India identified by planning commission (1967) as drought prone regions.
- Irrigation commission (1972), demarcated the drought affected areas and also introduced the criterion of 30% irrigated land.
- These areas are semi-arid and arid tract of Rajasthan, Gujarat, Western Madhya Pradesh, Marathwada, region of Maharashtra, Rayalseema and Telangana plateaus of Andhra Pradesh, Karnataka plateau and Higlands and interior parts of Tamil Nadu.

Due to the advancement in irrigation facilities, Haryana, Punjab and Northern Rajasthan have become protected regions.

## **Integrated Tribal Development Project in Bharmaur Region**

- The region lies between 32° 111 N and 32° 41′ N latitudes and 76° 22′ E and 76° 53′ E longitudes. Spread over an area of about 1818 sq km, the region mostly lies between 1500 m to 3700 m above the mean sea level.
- This region popularly known as the homeland of Gaddis and is surrounded by lofty mountains on all sides. It has Pir Panjal in the North and Dhaula Dhar in the South. In the east, the extension of Dhaula Dhar converges with Pir Panjal near Rohtang pass.
- The river Ravi and its tributaries, the Budhil and the Tundahen, drain this territory and carve out deep gorges.
- These rivers divide the region into four physiographic divisions called Holi, Khani, Kugti and Tundah areas. Bharmaurs experiences freezing weather conditions and snowfall in winter. It means monthly temperature in January remains 4°C and in July 26°C.

### Area and Life of People in Bharmaur

The area and life of people of Bharmaur region are as follows:

- 1. The tribal area covers Bharmaur and Holi tehsils of Chamba district of Himachal Pradesh
- 2. It is one of the most backward area economically as well as socially in Himachal Pradesh and also a notified tribal region since 21st November, 1975
- 3. The area is occupied by a tribal group of community named 'Gaddi', who practised transhumance and speak 'Gaddiali' dialect.
- 4. According to 2001 census, the total population of the area was 39113 i.e. 21 persons per sq km.
- 5. People of the area face major problems as the economy is mostly affected by its harsh climate, low resource base and fragile environment.

### **Economy in the Area of Bharmaur**

Traditionally, subsistence agriculture-cum-pastoral activities such as growing food grains and animal husbandry like sheep and goat are the main activities of these people.

## **Integrated Tribal Development Project (ITDP)**

- In 1970s, Gaddis were included in the list of scheduled tribes and in the same period the development process of tribal area of this region started.
- Later in 1974 under the Fifth Five Year Plan, the tribal sub-plan was introduced and Bharmaur was designed as one of the five Integrated Tribal Development Project (ITDP) in Himachal Pradesh.

Aims and priorities of the Intergrated Tribal Development Project are as follows:

- 1. Improving the quality of life of the Gaddis.
- 2. Narrowing the gap in the level of development between Bharmaur and other districts of Himachal Pradesh.

3. The highest priority was on development of transport and communications, agriculture and allied activities as well as social and community services.

The main achievements of the tribal sub-plan are as follows:

#### **Infrastructural Facilities**

Infrastructural facilities of tribal sub-plan are as follows:

- 1. Development of infrastructure i.e schools, health care facilities, potable water, roads, communications and electricity supply.
- 2. Villages located along the river Ravi in Holi and Khani areas are main beneficiaries infrastructural development.

## **Social Benefits**

Social benefits of tribal sub-plan are as follows:

- 1. There are tremendous increase in literacy rate, e.g, the female literacy rate in the region increased from 1.88% in 1971 to 65% in 2011.
- 2. Decline in gender inequality i.e. between male and female literacy rate.
- 3. Improvement in sex-ratio.
- 4. Decline in child marriage.

#### **Economic Benefits**

As the Gaddis had practiced traditionally, subsistence agriculture cum-pastroral economy, later on during the last three decades of twentieth century, pulses and other cash crops became one of the main crops of the region.

## **Some Shortcomings to ITDP**

- 1. In terms of infrastructural facilities, the remote villages in Tundah and Kugti areas are still remained unaffected.
- 2. The technology is still traditional in nature.
- 3. The importance of pastoralism has been decreasing day-by-day as only about one tenth of the total households practice transhumance.
- 4. But, still a sizeable portion of the Gaddis migrate to Kangra and its Fringing Zone in order to earn living from wage labour during cold season.

## Overview of Planning Perspective in India

India has centralised planning and the Planning Commission has been assigned to administer the

functions of planning in India.

Being a statutory body, Planning Commission is headed by the Prime Minister and has a Deputy Chairman and members. Five year plans are responsible to carry out the planning in India which are as follows:

- The First Five Year Plan launched in 1951 and covered the period, 1951-52 to 1955-56.
- Second and Third Five Year Plans covered the period from 1956-57 to 1960-61 and 1961-62 to 1965-1966, respectively.

- Two successive droughts during mid sixties (1965-66 and 1966-67) and war with Pakistan in 1965 forced plan Holiday in 1966-67 and 1968-69. This period was covered by annual plans which are also termed as rolling plans.
- The Fourth Five Year Plan began in 1969-70 and ended in 1973-74.
- Following this the Fifth Five Year Plan began in 1974-75, but it was terminated by the government one year earlier i.e. in 1977-78.
- The Sixth Five Year Plan took off in 1980.
- The Seventh Five Year Plan covered the period between 1985 and 1990.
- Once again, due to the political instability and initiation of liberalisation policy, the Eighth Five Year Plan got delayed. It covered the period from 1997 to 2002.
- The Tenth Five Year Plan began in 2002 and ended in 2007.
- The Eleventh Five Year Plan started in 2007 and ended in 2012. It was entitled "Towards faster and more inclusive growth".
- The Twelfth Five Year Plan in 2012 and it is still in progress. It will come to an end in 2017.

## **Sustainable Development**

- In the 1960, this was the period when people throughout the world were much concerned about the environmental issues because of undesirable effects of industrial development and thus, the concept of sustainable development emerged in western world.
- This level of fear among environmentalists and common people reached at its peak with the publication of The population Bomb' by Ehrlich in 1968 and 'The Limits to Growth' by Meadows

### **Aims of Sustainable Development**

- The main aim of sustainable development is to take care of economic, social and ecological spheres of development during the present times as well as conserve all the resources in such a manner that these can be retain for future generations.
- So, there is a need of changing our attitude towards nature as well as economic development.

## **Concept of Development**

- Development is a dynamic concept and has evolved in the second half of twentieth century, used to describe the state of particular societies and the process of changes experienced by them.
- In early human history, the main criteria of determination of a society's state was the interaction process between human societies and their bio-physical environment.
- Societies helped in the development of various levels of technology and institutions upon which human-environment process depend.
- These have helped in increasing the pace of human environment interaction, therefore, the momentum generated and festinated technological progress and transformation and creation of institutions.
- After the period of World War II, the two important terms i.e. development and economic growth considered as one concept. But due to unequal distribution, a faster

- rate of growth in poverty is experienced by even the developed nations having high economic growth.
- Then, redistribution with growth and 'growth and equity' broaden the term development in 1970s. Now, the concept of development not only restricted to economic sphere alone, but also incorporates balance and equality among people in term of welfare and quality of life of people, health education and other facilities, equal opportunity to all and ensuring political and civil rights.
- Hence, the concept of development has become multi-dimensional and stands for postive, irreversible transformation of the economy, society and environment.

## **World Commission on Environment and Development (WCED)**

- The United Nations established a World Commission on Environment and Development (WCED), after concerning the opinion of world community on the environmental issues.
- The WCED was headed by the Norwegian Prime Minister, Gro Harlem Brundtland. The commission gave its report entitled 'Our Common Future' in 1987, also known as Brundtland Report.
- In this report, 'sustainable development' took into consideration and defined as 'A development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

## **Measures for Promotion of Sustainable Development**

As we have seen that this project has affected the ecological sustainablity and physical environment of the region badly. So, attaining the goal of sustainable development in command area requires such measures that can achieve ecological, social and economic sustainabality, simultaneously.

Hence, five of the seven measures have been proposed in this respect such as:

- 1. Rigorous implementation of water management policy is the first and foremost requirement of this project. Stage I and Stage II comprising of protective irrigation and extensive irrigation for crops and pasture development, respectively according to the canal project.
- 2. By and large water intensive crops shall be avoided and plantation crops such as fruits shall be encouraged by folks.
- 3. In order to reduce the conveyance loss of water, few important programmes shall be taken into account such as the CAD (Command Area Development) programmes i.e.
  - Lining of water courses.
  - Land development and levelling.
  - Warabandi system (means equal distribution of canal water in the command area of outlet).

The areas should be reclaimed that got affected by water logging and soil salinity. The eco-development is a must, especially in the fragile environment of Stage II, through afforestation, shelterbelt, plantation and pasture development activities. By providing a decent financial and institutional support for cultivation of the land, allottees who have poor economic background, can be prove a positive step towards achieving the social sustainability in the region.

The economic sustainability can be attained through expanding the economic sector which must include agriculture and allied activities along with other economic sectors, as a whole. Hence, we will then find diversification of economic base and

establishment of functional linkages between basic villages, agro-service centres and market centres.

## Promotion of Sustainable Development in Indira Gandhi Canal Command Area

- It is one of the largest canal systems in India, conceived by Kanwar Sain in 1948. This project was launched on 31st March 1958 that transformed a desert into green land.
- The origin place of the canal is at Harike barrage in Punjab state and goes parallel to Pakistan Border at an average distance of 40 km in Thar Desert of Rajasthan (Marusthali).
- 9060, km is the total planned length of the system catering to the irrigation needs of a total culturable command area of 19.63 lakh hectares.
- The canal has two irrigation system such as 'flow system' and 'lift system'. Around 70% land of the command area is irrigated by flow system and rest 30% land by lift system.

There are tw'O stages through which the construction work of the canal system has been done such as:

## Stage I of Indra Gandhi Canal Command Area

- This command area covers Ganganagar, Hanumangarh and Northern part of Bikaner districts.
- Its culturable command area is 5.53 lakh hectares along with gentle undulating topography.
- In this stage, the irrigation system was introduced in early 1960s.

### Stage II of Indira Gandhi Canal Command Area

This stage covers 14.10 lakh hectares cultarable area of Bikaner, Jaisalmer, Barmer, Jodhpur, Nagpur and Churu districts.

The main characteristics of the area are:

- 1. Hot desert with shifting sands dunes.
- 2. Summer temperature upto 50°C.

Irrigation system was introduced in this stage in mid- 1980s. In the lift canal, water is lifted up to make it to flow against the slope of the land. All the lift canals of this system originate at the left bank of main canal while all the canals on the right bank of main canal are flow channels.

## **Effects of Indira Gandhi Canal Irrigation**

There are various effects of Indira Gandhi Canal irrigation on environment and on agricultural economy:

#### **Effects on Environment**

The environment of the areas is influenced by this project both positively and negatively:

• **Positive Effect** Now, there is sufficient soil moisture availability for a longer duration. Various afforestation and pasture development programme came into being.

A considerable reduction in wind erosion and siltation of canal systems have also been recorded.

• **Negative Effect** Due to intensive irrigation and excessive use of water, an alarming rate of water logging and soil salinity have been recorded.

## **Effects on Agriculture**

There are some positive and negative effect on agriculture:

- **Positive Effect** This canal irrigation led to increase in cultivated land and intensity of cropping. Main commercial crops i.e. wheat, rice, cotton, groundnut replaced the drought resistant crops like gram, bajra, and Jowar.
- **Negative Effect** Intensive irrigation has also became a cause of water logging and soil salinity. So, in the near future it may hampers the sustainability of agriculture.

## **VERY SHORT ANSWER**

1

What are the types of planning? Explain

#### Answer-

• Generally there are two types of planning, i.e. Sectoral Planning and Regional Planning.

## **Sectoral Planning**

 Means formulation and implementation of the sets of schemes or programmes aimed at development of various sectors of the economy such as agriculture, irrigation, manufacturing, power, construction, transport and communication etc.

## **Regional Planning**

- The uneven pattern of development over space necessitates that the planners have a spatial perspective and draw the plants to reduce regional imbalance in development.
- 2 What do you know about Target Area Planning?

#### Answer-

## Target Area Planning-

- The area which are remained economically backward, they are targeted for special care.
- Sometimes resources-rich region also remain backward. In order to solve the regional imbalances and social disparities the Planning Commission started Targeted area.
- This planning process is known as target area planning. Such as 'Command area development programme', 'Drought prone area development programme', 'Desert development programme', 'Hill area development programme' etc are examples which have been targeted separately for their economic development.
- 3 Mention in any three points about Hill Area Development Programme in India.

#### Answer-

## Hill area development programme

• This programme was initiated during fifth five year plan covering 15 district

- comprising all the hilly districts of Uttrakhand, Mikir Hills, North Cachar hills of Assam, Darjeeling district of West Bengal and Nilgiri district of Tamilnadu.
- The districts above 600 metres height and not covered under tribal sub plan were treated as backward hill areas, were included in hill area development programme.
- Planned to harness the indigenous resources Horticulture and plantation etc in those districts.
- 4 Explain in any five points about Droughtprone area programme.

#### Answer-

## Drought prone area programme

- This programme was initiated during fourth five year plan.
- To create assets through employment to the people in drought-prone areas was its objective.
- Irrigation, Land Development, afforestation, grassland development and rural infrastructure etc were emphasized.
- The Restoration of ecological balance between water, soil, plants and human and animal population should be a basic consideration in the strategy.
- There were 67 districts identified by Planning Commission of India from the states as Rajasthan, Gujarat, Western Madhya Pradesh, Tamil Nadu, Andhra Pradesh, Karnataka and Telangana.
- Irrigation Commission of India (1972) introduced criteria of 30% irrigated area and demarcated the drought prone areas.
- 5 Briefly explain about 'Integrated tribal development project in Bharmaur region'. **Answer-**

## Case study- Integrated tribal development project in Bharmaur region

- Bharmaur tribal area situated between PirPanjal in north and Dhauladhar in South comprises Bharmaur and holi Tehsils of Chamba of Himachal Pradesh.
- It is inhabited by Gaddi tribes who speak Gaddi dialect who live in a very harsh climate.
- They are economically largely depending on agriculture and sheep and goat rearing.
- The most significant contribution of tribal sub plan in Bharmaur region is the development of infrastructure in terms of schools, Healthcare facilities, potable water, roads, communication and electricity.
- At present literacy rate has increased, sex ratio has improved and child marriage have declined.
- Pastoralism is declining and transhumance practice has been decreased.
- What do you know about the Sustainable Development? How this term came to Light?

  Answer-

## **Sustainable Development**

- Development is a multi-dimensional concept and signifies the positive, irreversible transformation of the economy, society and environment.
- In the post World War II era, the concept of development was synonymous to economic growth which was measured in terms of GNP (Gross National Product), Per capita income and consumption.
- But, even the countries having high economic growth, experienced speedy rise in poverty because of its unequal distribution. So, in 1970s, the phrases such as

- **redistribution with growth** and **growth and equity** were incorporated in the definition of development.
- In 1970s, it was realized that the concept of development cannot be restricted to the economic sphere alone So it included the **well-being** and **living standard** of people, availing of the health, education and equality of opportunity and ensuring political and civil rights.
- The notion of **sustainable development** emerged in the wake of general rise in the awareness of **environmental issues** in the late 1960s in Western World people.
- The publication of 'The Population Bomb' by Ehrlich in 1968 and 'The Limits to Growth' by Meadows and others in 1972 further raised the level of fear among environmentalists in particular and people in general.
- This sets the scenario for the emergence of new models of development under a broad phrase 'sustainable development.'
- WCED (World Commission on Environment and Development) headed by Norwegian Prime Minister Gro Harlem Brundtland gave its report (Brundtland report) Our Common Future in 1987.
- The report defines Sustainable Development as a "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
- Sustainable development takes care of **ecological**, **social** and **economic aspects of development** during the present times and pleads for **conservation of resources** to enable the future generations to use these resources.
- What are various measures for Promotion of Sustainable Development of Indira Gandhi Canal?

## Answer-

## Measures for Promotion of Sustainable Development-

- The first requirement is strict implementation of water management policy. There should be protective irrigation in stage 1 and extensive irrigation and pasture development in stage 2.
- People should be encouraged to grow plantation crops such as citrus fruits.
- To reduce the conveyance loss of water, there should be Warabandi system (equal distribution of canal water in command areas of outlet)
- The areas affected by salinity and water logging should be reclaimed.
- The eco-development through afforestation, shelterbelt plantation and pasture development is necessary.
- Poor background people should be provided adequate financial and institutional support for cultivation of land.
- Agriculture and allied activities have to develop along with other sectors of economy.

# **Transport and Communication**

We use many items in our daily life. It is the different means of transportation in brings them from their production sites to the consumers. Different methods which man uses to transfer goods, things, services, ideas and him from one place another are called means of transport & communication.

Means of Transport				
Land Transport	Water Transport		Air Transport	
i. Roads	i. Inland	d waterways	i. National	
<ul><li>ii. Railways</li><li>iii. Road transport</li><li>iv. Pipelines</li></ul>	ii. Seaw	vays & Oceanic	ii. Internation	al

## **Land Transport:-**

With the economic and technological development, metalled roads and railways were developed to move large volume of goods and people from one place to another.

## **Roads Transport**

- India has one of the largest road networks in the world with a total length of 54.8 lakh km (2016-17). About 85 per cent of passenger and 70% freight transport take place using road transport.
- (1) National Highway (NH)-1 from Delhi to Amritsar
- (ii) NH-2 from Delhi to Kolkata.
- For the purpose of construction and maintenance, roads have been classified into: national highways, state highways, district roads and village roads.

## **National Highways**

- NH referred to roads which are constructed and maintained by central government.
- In 2008-09, total length of National Highways was 70934 km which was 19700 km in 1951
- These highways connect the state capitals, major cities, important ports, railways junctions, etc and carry' about 40% of the road traffic despite they constitute only 1.67% of total road length.

## **National Highways Development Projects**

- Golden Quadrilateral It is 5846 km long 4/6 lane, high density corridor. It was meant to connect India's four big metro cities of Delhi-Mumbai- Chennai-Kolkata. It will deduct the time-distance and cost of movement among the mega cities of India.
- North-South and East-West corridors The North-South corridor is a 4076 km long highway which is meant to connect Srinagar in Jammu and Kashmir with Kanyakumari in Tamil Nadu including Kochchi-Salem Spur. The East-West corridor is 3640 km long road which aims to connect Silchar in Assam with the port town of Porbandar in Gujarat.

## **State Highways**

These roads are connected to the National Highways and join the state capitals with district headquarters and other important towns.

#### **District Roads**

These roads connect district headquarters and other important nodes in the district. They account for 60.83% of the total road length of the country.

#### **Rural Roads**

These roads provide links in the rural areas. About 33.86% of the total road length in India is categorized as rural roads.

### **Other Roads**

These include Border Roads and International highways:

#### **Border Roads**

- Border Road Organisation (BRO) is responsible for construction and maintenance of these roads.
- It was established in May 1960 with the aim to accelerate economic development and strengthening defence preparedness through rapid and coordinated improvement of strategically important border roads.
- BRO's major achievement is construction of roads in high altitude mountainous terrain joining Chandigarh with Manali (Himachal Pradesh) and Leh (Ladakh).
- This road is located at the average height of 4270 meters above mean sea level.

## **International Highways**

They are constructed with the aim to promote harmonious relationship with neighbouring countries and provide an effective connection with India.

### **Density of Roads:-**

- The distribution of roads is not uniform in the country. Density of roads (length of roads per 100 sq km of area) is the method to compare the network of roads of one area to another area. The national average road density is 125.02 km (2008).
- As most of the Northern states and major Southern states have high density of roads (e.g. Uttar Pradesh has highest road density of 532.27 km), whereas Himalayan region, North-Eastern region, Madhya Pradesh and Rajasthan have low density of roads (e.g. Jammu and Kashmir has lowest road density of 10.04 km).

## **Rail Transport**

- India has one of the longest railway network in the world.
- In 1853, the first Indian railway was started from Bombay to Thane covering a distance of 34 km.
- Being the largest Government undertaking in India, Indian Railways network is 64460 km long (31th March, 2011).
- To reduce the pressure of this large size railway from a centralized railway management system, Indian Railway system has been divided into seventeen zones.

### **Gauges in Indian Railways**

Indian Railways has been divided into three categories. On the basis of the width of the track of Indian railways as follows:

• **Broad Gauge** In broad gauge, the distance between rails is 1.676 meter. The total length of broad gauge lines is 55188 km in 2011.

- **Meter Gauge** In meter gauge, the distance between the rails is 1 meter. The total length of meter gauge is 6809 km in 2011.
- Narrow Gauge In narrow gauge, the distance between the rails is 0.762 metros or 0.610 meters. The total length of narrow gauge line is 2463 km in 2011. This category of railway lines is mostly found in the hilly areas.

Indian Railways has taken major steps to improve the performance of this means of transport like:

- 1. To convert the meter and narrow gauges to broad gauge.
- 2. Replacement of steam engine by diesel and electric engines which may help in keeping the environment clean.
- 3. Introduction of metro rail in Kolkata and Delhi, etc.

## Water transport:-

Water transport is the cheapest means of transport for carrying heavy and bulky material as well as passenger services. It is a fuel efficient and eco-friendly mode of transport. The water transport is of two types:

- 1. Inland Waterways
- 2. Oceanic Waterways

## **Inland Waterways**

Before the introduction of railways, inland waterways was the chief mode of transport. But, now it is losing its significance due to:

- 1. Tough competition from road and railway transport.
- 2. Diversion of river water for irrigation purposes made them non-navigable in large parts of their courses.
- India has 14500 km of navigable waterways which accounts for about 1% of country's transportation.
- The Inland Waterways Authority which was setup in 1986 is responsible for the development, maintenance and regulation of national waterways in the country.
- Currently, there are three inland waterways which are considered as national waterways by the authority.

### **Oceanic Routes**

Ten other inland waterways have been identified by inland waterways authority. The backwaters (Kadal) of Kerala have special significance which not only provides transport but also attract tourists here. The famous Nehru Trophy Boat Race (Vallamkali) is also held in the backwaters.

- India's vast coastline of about 7,517 km (including islands) easily facilitates this type of transport. There are twelve major and 185 minor ports which provide infrastructural support to these routes.
- About 95% of India's foreign trade by volume and 70% by value moves through ocean routes.

## Air Transportation:-

- It is good for long distances and areas which have uneven terrain and climatic conditions.
- Air transport in India was started in 1911 with a short distance, (10 km) airmail operation from Allahabad to Nairn.

- Now it manages 126 airports including 11 international, 86 domestic and 29 civil enclaves at defence air fields.
- There are two corporations, Air India and Indian Airlines which manage air transport in India. Both corporations were nationalized in 1953.
- Now many private companies have also started passenger services.

#### **Indian Airlines**

- Indian Airlines, the largest state owned domestic carrier changed its names to 'Indian by dropping' word 'Airlines' in 8th December, 2005.
- The new brand name 'Indian' now appears on both sides of the fuselage. The logo depicting IA which was used to be display on orange tail is now replaced by a new logo.
- New logo is a partly visible blue wheel and is inspired by the Sun Temple at Konark (Odisha), symbolizing timeless motion, convergence and divergence.
- It also represents strength as well as trust that have stood the test of time.

#### **History of Indian Airlines**

- 1911-Air transport in India was launched between Allahabad and Naini.
- 947-Air transport was provided by four major companies namely Indian National Airways, Tata Sons Limited, Air Services of India and Deccan Airways.
- 1951-Four more companies joined the services i.e. Bharat Airways, Himalayan Aviation Limited, Airways India and Kalinga Airlines.
- 1953-Air transport was nationalized and two corporations, Air India international and Indian Airlines were formed. Now, Indian Airlines is known as Indian.

#### Oil and Gas Pipelines:-

- Pipelines are convenient and best means of transporting liquids and gases over long distances. These can also transport solids after converting them into slurry.
- Its one of the major achievement is the construction of Asia's first cross country pipeline. This pipeline covers a distance of 1157 km from Naharkatiya oil field in Assam to Barauni refinery in Bihar.
- In 1966, this pipeline was further extended to Kanpur, Uttar Pradesh. In Western region of India, OIL also constructed extensive network of pipelines Ankleshwar-Koyali, Mumbai High-Koyal and Hazira-Vijaipur-Jagdishpur (HVJ) pipelines.
- Recently, a pipeline is also constructed from Salaya (Gujarat) to Mathura (Uttar Pradesh). It is 1256 km long pipeline which transport crude oil from Gujarat to Punjab (Jalandhar) via Mathura.
- Construction of a 660 km long pipeline from Numaligarh to Siliguri is also in progress.

#### **Communication Networks:-**

• Development in the field of science and technology brought many revolutionary inventions in means of communication like post office, telegraph, printing press, telephone, satellite, etc.

On the basis of scale and quality, the mode of communication can be divided into following categories:

#### **Personal Communication System**

- E-mail is the main source through which a user can directly connect with others and can also get access to the world of knowledge and information.
- Use of internet is increasing for e-commerce and carrying out money transactions.
- The internet is like a huge control warehouse of data, with detailed information on various items.
- Letters, telephone, fax are also used for personal communication.

#### **Mass Communication System Radio**

- Radio broadcasting was started in 1923 by Radio Club of Bombay. Within short time, it gained immense popularity and became a part of every household in India.
- After seeing its popularity, the government of India, in 1930 took the control of this mode of communication under Indian Broadcasting System.
- It was changed to All India Radio in 1936 and to Akashwani in 1957.

#### **Television (TV)**

- First television broadcasting was started in National Capital in 1959. Till 1972, it was the only urban place where TV services were available.
- After 1972, several other centres became operational. In 1976, TV broadcasting services were separated by All India Radio and got a separate identity as Doordarshan (DD).
- Its revolutionary development began after the launch of INSAT-IA (National Television -D1) when Common National Programmes (CNP) were started for the entire network and its services were extended to the backward and remote rural areas.

#### **Satellite Communication**

- Satellite is an advanced mode of communication. From economic and strategic point of view, use of satellite is very vital for the country as these give continuous and synoptic view larger area.
- Various operations can be done through satellite images, e.g. weather forecast, monitoring of natural calamities, surveillance of border areas, etc.

# There are two satellite systems in India on the basis of configuration and purposes: Indian National Satellite System (INSAT)

• This was established in 1983. It is a multi-purpose satellite system for telecommunication, meteorological observation and for various other data and programmers.

#### **Indian Remote Sensing Satellite System (IRS)**

- The IRS satellite system started in India with the launch of IRS-IA in March 1988 from Vaikanour in Russia.
- India has also developed her indigenous launching vehicle PSLV (Polar Satellite Launch Vehicle).
- The National Remote Sensing Agency (NRSA) at Hyderabad is responsible for facilitating for acquisition of data and its processing.

#### **VERY SHORT QUESTION ANSWER**

**1.** What are the disadvantages of road transport?

**Answer:** Disadvantages of Road Transport. Road transport is costly. It results in air pollution. Heavy goods cannot be taken to long distance. Road transport is more accident prone.

**2.** What is the Golden Quadrilateral?

OR

Explain the term 'Gloden Quadrilateral'.

**Answer:** It is a super-highway project linking Delhi, Kolkata, Chennai and Mumbai. It has six super highways. It forms the shape of a Quadrilateral.

3. Name four national highways mentioning their terminals.

Answer: (i) Sher Shah Suri Marg. National Highway No. 1. (Delhi to Amritsar)

- (ii) National Highway No. 3. Between Agra and Mumbai.
- (iii) National Highway No. 7. Between Varanasi and Kanniyakumari.
  - (iii) National Highway No. 2. Between Delhi and Kolkata.
- **4.** Name two national waterways.

**Answer:** 1. National Waterway No. 1. Pravagraj Haldia on Ganga river.

- 3. National Waterway No. 2. Sadiya to Dhubri or Brahmaputra.
- **5.** Name the different types of railways in India on the basis of width. Where does India rank in world railways?

**Answer:** Rail Transport Indian railway system is the main artery of the country's inland transport. It is the biggest in Asia and the fourth largest in the world. It has a route length of 63221 km on which 12,670 trains run every day connecting 7,500 stations. Indian railways comprise of three gauges: broad gauge (1.616 meters is the distance between both the lines); meter gauge (1.00 meter) and narrow gauge (0.762 and 0.610 meters). Its fleet of locomotives comprises of steam, diesel and electric engines.

Different parts of railways having different width have been constructed in India due to its diverse relief. Broad gauge railway lines are constructed in plains while narrow gauge railway lines are constructed in hilly region.

Broad gauge = 1.6 meters wide Meter gauge = 1 meter wide Narrow gauge = 0.76 meter wide.

**6.** Describe the two main types of air services in India.

**Answer:** The air services In India are of two types viz. international and domestic. Air India provides international air services for both passengers and cargo traffic to 35 destinations from four focal points—Delhi, Mumbai, Chennai and Kolkata. Air India carried 3.83 million passengers in 2000-01.

Major international air routes are Delhi-Rome-Frankfurt, Mumbai-London, Delhi-Moscow, Kolkata-Tokyo, Kolkata-Perth, Mumbai- London-New York. Indian Airlines, Affiance Air (subsidiary of Indian Airlines), private scheduled airlines and air taxis provide domestic air services.

Indian Airlines operations also extend to the neighbouring countries of Southeast Asia and West Asia. At present, there are two private scheduled airlines operating on the domestic network; 38 companies hold non-scheduled air taxi operators permit. Private operators presently cater to nearly 52.8 per cent of the domestic air traffic. The share of private sector

airways has increased rapidly after liberalisation.

7. What are the problems of having three railway gauges?

**Answer:** The railways in India are of three gauages—Broad gauge, meter gauge and narrow gauge. The meter gauge is being converted into broad gauge. This is called unigauge project. It avoids the transshipment of goods from one gauge to another. It will increase the capacity of transportation by trains and will he cheaper also.

**8.** Where does India rank in the world in context to roadways? Describe the major National Highways.

#### OR

"India has one of the largest networks of roads in the world." Support the statement with examples.

**Answer:** Roads. The road network in India is one of the largest in the world. The road length has increased from 397.62 thousand kilometers in 1950-51 to around 42 lakh kilometers. Of the total kilometer age, the length of the surfaced (metalled) roads increased from 156.11 thousand kilometers in 1950-51 to 833.0 thousands kilometers while the unsurfaced (unmetalled) road length during the same period increased from 241.5 thousand kilometers to 940 thousand kilometers.

A number of important National Highways in India run in north-south and east- west directions. They link one part with the other:

- i. Sher Shah Suri Marg is historically very important. It connects Kolkata with Peshawar. It is now known as National Highway 1, which links Delhi and Amritsar,
- ii. National Highway 2 which links Delhi and Kolkata
- iii. National Highway 3 runs between Agra and Mumbai via Gwalior, Indore and Nasik.
- **iv.** National Highway 7 is the longest one which links Varanasi with Kanniyakumari via Jabalpur, Nagpur, Hyderabad, Bangalore and Madurai. It traverses a distance of 2,325 km.
- v. National Highways 5 and 17 run along the eastern and western coasts respectively.
- vi. National Highways 15 represents the border road in Rajasthan desert and run through Kandla, Jaisalmer, and Bikaner and joins the border road in Punjab.
- **9.** Describe the national waterways of India.

**Answer:** The Inland Waterways Authority of India was set up in 1986 for the development, maintenance, and regulation of National Waterways in the country. At present, there are only three National Waterways in the country. Ten other waterways are being considered for up gradation as National Waterways.

The three national Waterways are:

**National Waterway 1:** The Allahabad-Haldia stretch of the Ganga-Bhagirathi Hooghly river system (1620 km);

National Waterways 2: The Sadiya-Dhubri stretch of the Brahmaputra river (891 km);

**National Waterways 3:** The West Coast Canal from Kottapuram to Kollam alongwith Udyogmandal and Champakar canals (205 km).

10. Write a note on Akashvani.

**Answer:** Akashvani: Radio is an effective means of mass communication in the country. Radio broadcasting started in India in 1927 with two private transmitters located at Mumbai and Kolkata. All India Radio (AIR) was constituted in 1936. It is also known as Akashvani.

At the time of Independence there were six radio stations. At present, the All India Radio has 208 stations and 327 transmitting centers.

These stations and transmitting centers provide services to 99 per cent of the population and 90 per cent of the area of the country. Private parties also have set up about 100 FM radio stations. All India Radio broadcasts a variety of programmers like information, education and entertainment.

11. Write a note on Doordarshan in India.

**Answer:** Doordarshan: Doordarshan, the national television of India, is one of the largest terrestrial networks in the world. It has changed socio-cultural life of the people both in villages and in towns.

DD-1 operates through a network of 1,042 terrestrial transmitters that reaches to over 87 per cent of the population.

For rtiral audiences, several programmers are regularly transmitted. Similarly, programmes on family welfare and healthcare are broadcasted every day. Music and drama are major components of the schedule of broadcasting.

All India Radio commissioned the National Channel in 1998, which is essentially a night service, airing evening to morning broadcast.

**12.** What do you mean by 'Open Sky Policy5?

**Answer:** Air transport terminals are called airports. Air transport cost is comparatively very high, and therefore, it is mainly used for passenger services.

Only light and valuable cargo is dispatched by cargo aircraft. In order to help Indian exporters and make their export more competitive, the Government of India introduced the 'open sky policy 5' for cargo.

Under this policy any foreign airlines or association of exporters can bring freighters to the country for upliftment of cargo.

13. What do you know about Sher Shah Suri Marg?

**Answer:** Sher Shah Suri built the Shahi (Royal) road to strengthen and consolidate his empire from the Indus Valley to the Sonar Valley in Bengal. This road was renamed the Grand Trunk (GT) road during the British period, connecting Calcutta and Peshawar. At present, it extends from Amritsar to Kolkata. It is bifurcated into 2 segments:

i. National Highway (NH) - 1 from Delhi to Amritsar, and

ii. NH-2 from Delhi to Kolkata.

**14.** What is the importance of Konkan Railway?

#### OR

Describe any three features of Konkan Railway.

**Answer:** Konkan Railway. One of the important achievements of Indian Railways has been the construction of Konkan Railway in 1998. It is 760 km long rail route connecting Roha in Maharashtra to Mangalore in Karnataka. It is considered an engineering marvel.

It crosses 146 rivers, streams, nearly 2000 bridges and 91 tunnels. Asia's largest tunnel which is nearly 6.5 km long, also lies on this route. The states of Maharashtra, Goa and Karnataka are partners in this undertaking.

**15.** State any six characteristics of road transport in India.

#### **Answer:**

- India has one of the largest road network in the world.
- The total length of roads in India is 42 lakh kms.
- About 85% of passenger and 70 percent of freight traffic is carried by roads.
- Roads continue to concentrate in and around urban centres.
- Rural areas have the least km of roads.
- 5846 km long Golden Quadrilateral network connects Delhi, Chennai, Kolkata and Mumbai.

**16.** Which is the most effective and advanced personal communication system in India? Explain any four characteristics of it.

#### **Answer:**

Internet is the most effective and advanced personal communication system in India. Characteristics.

- It is widely used in urban areas.
- It connects the user through E-mail with the world.

- It is widely used for e-commerce and carrying out money transactions.
- It is a store house of detailed data.

**17.** Explain with five suitable examples how the level of Economic development and nature of terrian affect the density of roads in India.

#### OR

Why is the distribution of roads not uniform in India? Explain with I examples.

**Answer:** The distribution of roads is not uniform in the country. The level of economic development and nature of terrian are the main determinants of density of roads.

Construction of roads is easy and cheaper in plain area.

Quality of roads is better in plains, as compared to roads in high altitude areas.

The density of road is 10.48 km in Jammu and Kashmir (including Ladakh) where as it is 387.24 km in Kerala (a plain area).

The density of roads is high in northern states due to the high level of economic development.

18. What are National Highway? Explain any four uses of national 'highways in India?

#### OR

Describe any five characteristics of national Highway of India.

**Answer:** National Highway: The main roads which are constructed by the Central Government are known as the National Highways.

- These are meant for inter-state transport.
- These help in movement of defence goods and material in strategic areas.
- These connect the state capitals, major cities ports, railway junctions, etc.
- These carry 40% of road traffic, while these are only 2% of the total road length.

#### **19.** The railway network in the north Indian Plain is dense. Why?

**Answer:** A dense network of railways is developed in the north Indian plains. About 50% of the total length of railways in India is found in northern India. The northern railways is the longest railway with a length of 10,977 kms. Many physical and economic factors are responsible for it.

- Northern plain is a level plain with low altitude. It is best suited for the construction of railways.
- Due to dense population, big towns have developed which has led to high density of railway.
- The intensive development of agriculture and industries has promoted the construction of railway lines.
- It is essential to connect Mumbai and Kolkata with their hinterlands or northern plain.

#### **20.** Describe the growth and development of Border Roads in India.

#### OR

Which apex body develop the border roads? Explain the importance of border roads with examples.

**Answer:** Looking at the strategic importance of our border areas, the Border Roads Organisation was set up in 1960 and entrusted with the construction and maintenance of roads in the border states of the country. These border roads have helped in accelerating the economic development in these areas by increasing accessibility besides helping in strengthening of the defence preparedness.

It includes the highest road of the world from Manali to Leh, at an altitude of 4220 meters above sea level. Along Indo-Chinese border, Hindustan Tibetan Road has been constructed.

The board has constructed about 22800 km of Border roads and manages above 16400 km. of roads in border area.

**21.** 'A well-knit and co-ordinated system of transport is necessary for sustained economic growth of the country'. Discuss.

**Answer:** Transport network is established to facilitate the movement of people and goods. It is the means of bringing human beings and the things they need and use together. It functions as a lifeline of the spatial economy at all territorial levels: A transport system involves origin, destination, route and the carrier.

- Origin. Origin is the point where the traffic originates.
- Destination. Destination is the point where it terminates.
- Route. Route is the surface on which movement takes place.
- Carrier. The carrier is the vehicle that moves the passenger or cargo. A well-knit and coordinated system of transport plays an important role in the sustained economic growth of the country.
- **22.** How are Indian Railways contributing to the growth of national economy? Explain with examples.

#### **Answer:** Indian Railways:

- (i) Indian railways network is one of the longest in the world.
- (ii) It facilitates the movement of both freight and passengers. The total freight carried by railways is 557.39 million tonnes. The total number of passengers carried by railways is 5112 million.
- (iii) Metro rail has revolutionised the urban transport system in Kolkata and Delhi.
- (iv) Railways developed around towns, raw material producing areas, hill stations have been developed for the exploitation of resources.
- (v) Railways could run to remain the main means of transport for the masses.

#### **23.** Distinguish between

(a) Personal communication and (b) Mass communication.

#### OR

Classify means of communication on the basis of scale and quality into two categories. Explain any two characteristics of each category.

#### **Answer:**

Personal Communication	Mass Communication
1. Personal communication are the means of	1. These are the means of delivering messages
delivering messages between individuals or	from an individual or a group to a large
small groups.	audience.
2. Messages are carried between the sender and the receiver both ways.	2. Messages are delivered from a sender to a large audience usually one-way.
3. These means of communication include post card, letter, telegram, fax, telephone.	3. These means of communication include newspapers, magazines and other periodicals, electronic media like radio, television, films, etc.

**24.** Distinguish between a National and a State highway.

#### **Answer:**

National Highways	State Highways
<ol> <li>These are the major roads of the whole country.</li> <li>These connect the different capitals of state with major industrial and commercial towns of the country.</li> </ol>	1. These are the major roads within a state. 2. These connect the state capitals with the major towns and district head- quarters within a state.
<ul> <li>3. These are maintained by the Central Govt.</li> <li>4. Total length of national highways in India is 71,000 kms.</li> <li>5. These have commercial and strategic significance;</li> <li>6. Sher Shah Suri Marg (G.T. Road) is a national highway.</li> </ul>	<ul> <li>3. These are maintained by the State Govt.</li> <li>4. The total length of state highways is 1,37,712 kms.</li> <li>5. These have administrative significance.</li> <li>6. Amritsar-Chandigarh is a state highway</li> </ul>

**25.** What are border roads? Give two characteristics of border roads.

**Answer:** Border roads are strategically important roads along the Northern and North-eastern boundary of the country.

- (i) These are roads in high altitudes and mountainous areas.
- (ii) These are constructed and maintained by BRO (Border Road Organisation)
- **26.** Describe any three advantage of Satellite Communication in India.

**Answer:** Advantage of Satellite Communication

Satellite communication is vital for the country due to economic and strategic reasons:

- (i) They are significant means of communication.
- (ii) These can be used for the weather-forecast, monitoring of natural calamities and surveillance of border areas.
- (iii) This is useful in the management of natural resources
- **27.** 'The distribution of roads in I India is not uniform'. Examine the statement giving three reasons.

#### **Answer:**

- (i) The density of roads varies from only 10.48 km in Jammu and Kashmir (including Ladakh) to 387.24 km in Kerala.
- (ii) Nature of topography is the main basis of road density.
- (iii) Construction of roads is easy and cheaper on plains, while it is expensive on hilly terrain.
- 28. Describe any three advantages of pipelines as a means of transport in India.

#### **Answer:**

- (i) Pipelines are used to transport liquids and gases.
- (ii) It is environmental-friendly means of transport.
- (iii) Pipelines can be laid through difficult terrain and also under water.
- **29.** Define the term 'communication.' Describe the importance of telecommunication. **Answer:** Communication is an activity of conveying information through the exchange of thoughts, messages or information by speech, visual, writing or behavior. Importance of Telecommunication:

- Telecommunication is an important tool for business. This device is used to receive and send messages, access data etc.
- This refers to the exchange of information with electronic and electrical means over a long distance.
- Telecommunication also useful for students.
- Telecommunication is helpful for people living in areas that do not have special care facility. With this they get in touch with a healthcare provider.
- Telecommunication plays a vital role in transport sector.

#### **Important Extra Questions Long Answer Type**

**1.** Describe the distribution of railways in India.

#### **Answer:**

Distribution of Railways. A close look at the railway map of India in any atlas would reveal the following pattern of the railway network:

(1) Northern plains. A dense network of railways has been developed in the Northern Indian Plain from Amritsar to Howrah with a few focal points like Delhi- Kanpur-Mughal-Sarai, Lucknow, Agra and Patna.

A dense network of railways is developed in the north Indian plains. About 50% of the total length of railways in India is found in northern India. The northern railways are the longest railway with a length of 10,977 kms. Many physical and economic factors are responsible for it.

- Northern plain is a level plain with low altitude. It is best suited for construction of railway.
- Due to dense population, big towns have developed which have led to high density of railway.
- The intensive development of agriculture and industries h as promoted the construction of railway lines.
- It is essential to connect Mumbai and Kolkata with their hinterlands of northern plain.
- (2) **Peninsular plateau.** The peninsular region, Gujarat and Tamil Nadu have a denser rail network as compared to other parts. The whole of the peninsular region has a hilly and plateau terrain. The concentration of population is moderate. Therefore, the rail network is also sparse. Trunk routes are aligned in such a way that there are efficient connections between Mumbai-Chennai, Chennai-Cochin, Chennai- Delhi and Chennai-Hyderabad.
- (3) Coastal plains. There is a distinct contrast in the rail network between eastern coastal plains and western coastal plains. There exists a long trunk route all along the east coast. Such a rail track is the Konkan Railway of 837 km. long which has been built along the western coast from Mumbai to Cochin.
  - The outcrops of the Western Ghats being very close to the coast, restrict the extent of the coastal plain while the eastern coast is wider and the Ghats lie away from the coast.
- **(4) Areas with sparse Rail network.** Himalayas, west Rajasthan, Brahmaputra valley, North East hilly region have sparse rail-network.
  - (a) Himalayan Region. The mountainous terrain of the Himalayas is such a noteworthy region. The rugged terrain, hill and valley topography, backward economy and sparse population are the factors responsible for the sparse rail network in this region.

- (b) Western Rajasthan. In western Rajasthan a few metre gauge railway lines have penetrated the arid tract.
- (c) Brahmaputra valley. The Brahmaputra Valley has two parallel lines but no railway line has been constructed on the Meghalaya plateau.
- (d) N.E. Region. In Tripura, Mizoram, Manipur and Nagaland, no railways have been constructed. The main reasons for the absence of a railway network are the hilly terrain and forested tracts. The cost involved in providing railway tracks in these regions is too high. The sparse population is another important aspect which has not encouraged this investment.
- 2. Describe the major oil and gas pipelines of India.

**Answer: 1. Naharkatiya Barauni pipeline.** Oil India Limited constructed the first pipeline of 1,152 km from Naharkatiya oilfield in Assam to Barauni refinery in Bihar via Noonmati (1962-68).

- **2. Haldia-Kanpur pipeline.** To transport refined petroleum products. Barauni-Kanpur pipeline was laid down in 1966. Haldia-Maurigram-Rajbandh pipeline was constructed later.
- **3. Ankleshwar-Koyali pipeline.** Extensive network of pipelines has been constructed in the Gujarat region. First pipeline connected the Ankleshwar oilfield to Koyali refinery (1965). Later, Kalol-Sabarmati crude pipeline, the Navagaon-Kalol-Koyali pipeline and the Mumbai High-Koyali pipeline were laid.
- **4. Ahmedabad-Koyali pipeline.** Ahmedabad has been linked with Koyali by pipeline for transport of petroleum products.
- **5. Ankleshwar-Vadodara pipeline.** Gas pipelines have also been laid down between Khambhat and Dhuvaran, Ankleshwar and Uttaran, and Ankleshwar and Vadodara. Gas Authority of India Limited (GAIL) operates over 4,200 km of pipeline in the country and supplies gas to power plants.
- **6. HBJ gas pipeline.** Construction of a cross country 1,750 km long Hazira-Bijapur-Jagdishpur (HBJ) pipeline has already been completed. This pipeline has now been extended from Bijapur to Dadri in Uttar Pradesh.
- **7. Kandla-Delhi pipeline.** GAIL is also implementing a 1,246 km long LPG pipeline project from Kandla/Jamnagar in Gujarat to Luni in Uttar Pradesh via Delhi.
- **8. Mathura-Jalandhar pipeline.** The Mathura refinery gets its crude from the Mumbai High through pipeline, which extends from Salaya on the Gulf of Kachchh to Mathura, Petroleum product supply pipeline exists between Mathura and Jalandhar via Delhi and Ambala, and between Mumbai and Pune for the transport of petroleum products.
- **3.** Describe the main features of development of roads in India.

**Answer:** The history of roads construction in India is very old. Sher Shah Suri constructed Grand Trunk Road. After independence, a 10 year road development scheme known as the Nagpur Plan, was prepared. Four types of roads are found in India:

- (i) National Highways (79,243 km)
- (ii) State Highways (1,31,899 km)
- (iii) District Roads (4,67,763 km)
- (iv) Village Roads (26,50,000 km)

#### Main features of Roads in India:

- (1) India has 13,94,000 kms of metalled roads.
- (2) India has 8,73,500 kms of unmetalled roads.
- (3) India has just 41 km. road length for every 100 sq. km. area. It has a road length of 251 km for every 1 lakh people.
- (4) India has 79,243 kms of National highways.

- (5) About 26 lakh automobiles move on roads of India.
- (6) Annual income from roads is about 1500 crore rupees.
- (7) Indian roads carry about 30% of total freight of the country.
- (8) The important National highways are:
  - Sher Shah Suri Marg (G.T. Road) Kolkata to Jammu.
  - Delhi-Mumbai Road
  - Kolkata-Mumbai Road
  - Mumbai-Chennai Road
  - Great Deccan Road (Varanasi to Kanyakumari)
  - Kolkata-Chennai Road.
  - Pathankot-Srinagar Road.
  - The Border Road Development Board was established in 1960.

It has got constructed about 38,028 km. long metalled roads in border areas. It has constructed the world's highest road from Manali (H.P.) to Leh (Ladakh). The average height of this road is 4,270 metres.

#### **Geographical Perspective on Selected Issues and Problems**

#### **Environmental Pollution**

Environmental pollution is the release of substances and energy from waste products of human activities. It is of various types. Thus, they are classified on the basis of medium through which pollutants are transported and diffused.

The classification of pollution are as follows:

- 1. Water pollution
- 2. Air pollution
- 3. Noise pollution
- 4. Land pollution

#### **Water Pollution**

Quality of water is majorly degraded by a number of factors i.e. indiscriminate use of water by fast growing population and expansion of industries. No surface water is found in pure form in rivers, canals, lakes, etc as all the water sources contain small quantities of suspended particles, organic and inorganic substances. Water becomes polluted, when quantity of these substances increases in it. It becomes unsuitable for human uses and its self purifying capacity declines.

#### There are two sources of water pollution:

- **Natural** Erosion, landslides, decay and decomposition of plants and animals, etc are natural sources that make water polluted.
- **Human** Industrial, agricultural and cultural activities of human beings make water polluted.
  - Water pollution created from human beings are major problem in modern times. Industrial activities of pollution.

#### Sources of Pollution in the Ganga and the Yamuna Rivers

River and state	Polluted Stretches	Nature of Pollution	Main Polluters
Ganga (Uttar Pradesh, Bihar and West Bengal)	Downstream of Kanpur	Industrial pollution from towns like Kanpur.	Cities of Kanpur, Allahabad, Varanasi, Patna and Kolkata, release domestic wastes into the river.
	Downstream of Varanasi	Domestic wastes from urban centres.	
	Farrakka Barrage	Dumping of carcasses in river.	
Yamuna (Delhi and Uttar Pradesh)	Delhi to confluence with chambal	Extraction of water by Haryana and Uttar Pradesh for irrigation.	Delhi dumping its domestic waste.
	Mathura and Agra	Agricultural runoff resulting in high levels of micro-pollutants in the Yamuna.	
		Domestic and industrial waste of Delhi flowing into the river.	

Most of the industrial wastes, e.g. polluted waste water, poisonous gases, chemical residuals numerous heavy metals, dust, smoke, etc are disposed off in running water, lakes, reservoirs, rivers and other water bodies and thus, destroy the bio-system of these waters. Major culprits are leather, pulp and paper, textiles and chemicals industries.

Today use of various types of chemicals like inorganic fertilizers, pesticides and herbicides are common in agriculture. These chemicals pollute surface water such as rivers, lakes, tanks as well as groundwater by infiltrating into the soil. These fertilizers increase the amount of nitrate content of surface waters. Besides this, cultural activities such as pilgrimage, religious fairs, tourism, etc also cause water pollution. In India, almost all surface water sources are contaminated and unfit for human consumption.

polluted water can harm human health and can cause various water borne diseases, e.g. diarrhoea, intestinal worms, hepatitis, etc. World Health Organisation (WHO) shows that about one-fourth of the communicable diseases in India are water borne.

#### Air Pollution

A larger proportion of contaminants like dust, fumes, gas, fog, odour, smoke or vapour in air for a long duration is known as air pollution may be harmful to flora and fauna and toproperty. There is an increase in emission of poisonous gases into the atmosphere because of increasing use of various fuels for energy in various sectors, thus resulting in the pollution of air.

The main sources of air pollution are combustion of fossil fuels, mining and industries which release oxides of sulphur, and nitrogen, hydrocarbons, carbon dioxide, carbon monoxide, lead and asbestos.

#### **Effects of Air Pollution**

The effects of air pollution are as follows:

- 1. Air pollution is responsible for many diseases related to our respiratory, nervous and circulatory systems.
- 2. Air pollution is responsible for creating smoky fog over cities which is known as urban smog. It has negative effects on human health.
- 3. Air pollution is also responsible for acid rain. First rain after summer in urban areas always shows high acidic nature of rain water i.e. it shows lower pH level than the subsequent rain.

#### **Noise Pollution**

Noise pollution refers to a noise that causes a condition which is unbearable and uncomfortable to human beings. This noise can be from various sources. It is a recent phenomenon which became a serious concern only after a variety of technological innovations. The level of steady noise is measured by sound level expressed in terms of decibels (dB).

Factories, mechanised construction and demolition works, automobiles and aircrafts are major sources of noise that cause noise pollution. Apart from these, there are also some periodic sources of noise pollution such as sirens, loudspeakers in different festivals and programmes and other activities of different communities. Noise produced by traffic is a major source of noise pollution. It creates a huge inconvenience to the people. Intensity and nature of noise made by traffic is dependent on various factors such as type of vehicle (aircraft, train vehicle, etc)/ condition of road and condition of vehicle (in case of automobiles).

In sea traffic, the noise; pollution is limited to the harbour because of loading and unloading activities of containers. Noise pollution from industries is also a serious problem but its intensity varies because of some factors such as type of industry, types of machines and tools, etc.

The intensity of noise pollution decreases as distance from source of pollution (Industrial areas, arteries of transportation, airport, etc) increases. Thus, noise pollution is location specific.

#### **Effects of Noise Pollution**

Noise pollution is a major cause of anxiety, tension and some other mental problems and disorders among people in many metropolitan and big cities in India.

#### **Urban Waste Disposal**

Overcrowding, congestion, increasing population, improper infrastructure and facilities to support this population, lack of sanitation, foul air, etc are some features of urban areas. Mismanagement of solid wastes and environmental pollution caused by them has now become a major problem. Solid wastes are a variety of old and used articles, for e.g. stained small pieces of metals, broken glass wares, plastic containers, polythene bags, ashes, floppies, CDs, etc dumped at different places.

These discarded materials are also known as refuses, garbage and rubbish, etc and are disposed off from two sources i.e. household or domestic establishments and industrial or commercial establishments. Public lands or private contractor's sites are used to disposed off household or domestic wastes. Low lying public grounds (landfill areas) are used to disposed off industrial solid wastes by public (municipal) facilities. Industries, thermal power houses and building constructions and demolitions are contributing with more turn out of ashes and debris in solid wastes.

Disposal of industrial wastes has increased because of the concentration of industrial units in and around urban centres. Urban waste is a bigger problem in small towns and cities than metropolitan cities in the country. About 90% of solid waste is collected and disposed off successfully in Mumbai, Kolkata, Chennai, Bangalore and other metropolitan cities. About 30-50% solid wastes in other towns and cities in country is not collected and disposed off properly. It is a major problem because it accumulates on streets, in open spaces between houses and in wastelands and can cause various health problems.

#### **Impacts of Improper Management of Solid wastes**

Improper management of solid wastes has following impacts:

- 1. Solid wastes are threat to human health and can cause various diseases. It creates foul smell and it harbours flies and rodents that can cause typhoid, diphtheria, diarrhoea, malaria, cholera and other diseases.
- 2. Solid waste can create inconvenience rapidly if they are not properly handled. Wind and rain water can splitted it and cause a discomfort to people.
- 3. Industrial solid waste can cause water pollution by dumping it into water bodies. Drains carrying untreated sewage also result into various health problems.
- 4. Untreated waste release various poisonous biogases such as methane in air by slow fermentation process. These wastes are resources as energy can be generated from them! By compositing these wastes, problem of energy could be solved as well as its management in urban areas.

#### **Rural-Urban Migration**

Movement of people from rural area to urban area are caused by various factors such as high demand for labour in urban areas, low job opportunities in rural areas and disparities in terms of development in rural and urban areas. Smaller and medium cities provide low opportunities which force people to bypass these small cities and directly come to the mega cities for their livelihood.

Mostly daily wage workers like, welders; carpenter, etc move to another cities for work, periodically and provide remittances to their families for daily consumption, health care, schooling of children, etc. This has improved their early abject situation into a better one. Simultaneously, due to temporary and transferable job situation, these labourers and their families hear the pain of separation of their near and dear ones.

Sometimes these workers also face difficulty in assimilation to the new culture and environment. Due to these menial jobs at low wages in informal sector in urban areas, the spouses are left behind in

rural areas to look after children and elderly people. Thus, the rural-urban migration stream is dominated by the males.

#### Trend of Urbanisation in the World

Currently, about 54% of the world's 7 billion (2011) population lives in urban areas of world . This proportion of urban population will increase in future. It is estimated that between 2025 to 2030, this percentage would be grown with 1.44% per year. This high urban population will pressurise governments to optimise infrastructure facilities in urban areas for giving a standard quality of life.

It is estimated that by 2050, about two-thirds of the world's population will live in urban areas. It would create a high pressure on existing infrastructure and sanitation, health, crime problems and urban poverty.

There are various factors responsible for growth of urban population:

- 1. When high birth rate and low morality rate increase.
- 2. Net in-migration or movement of people from other areas.
- 3. Reclassification of urban areas to encompass formerly rural settlements.

In India there is a estimation that about 60% India's urban population has increased after 1961. About 29% of this growth has been caused by rural-urban migration.

#### **Problems of Slums**

- Settlement geography differentiate the two concepts namely urban or urban centres and rural. They are also defined differently in different countries.
- These two are differentiated by their functions but sometimes interdependent on each other. These two concepts are also divided in terms of their separate cultural, economic and technological aspects.
- According to 2001 census, about 72% of India's population is rural (according to 2011, rural population is 68.84%). Most of these rural areas are still in poor conditions and perform primary activities.
- According to Mahatama Gandhi, villages are ideal republics. These work as supplement to the core urban centre forming its hinterland.
- Urban areas are more developed in terms of the socio-economic, politico-cultural, etc than other areas.
- Urban areas have farm house, high income of people and their localities, wide roads, street lights, water and sanitation facilities, lawns, well developed green belts, parks, playgrounds and other facilities, provisions for individual security and right of privacy.
- Apart from these attractions urban areas also have slums, jhuggi jhopari' clusters and colonies of shanty-structures.
- These are environmentally incompatible and degraded areas of the cities. These are occupied by the migrants who were forced to migrate from rural areas to urban areas for employment and livelihood. But because of high rent and high costs of land, they could not afford proper housing and start to live in these areas.

#### **Characteristics of Slums**

Slums have following characteristics:

- 1. Slums are least choice residential areas that have broken down house, bad hygienic conditions, poor ventilation and does not have basic facilities like drinking water, light and toilet facilities, etc.
- 2. Slums are overcrowded with people and have many narrow street patterns prone to serious hazards from fire.
- 3. Most of the slum dwellers works for low wages, high risk-prone and unorganised sectors of the urban economy.
- 4. They face various health related problems such as malnutrition, illness and prone to various diseases. They are not able to send their children school to provide them education because of low level of income.
- 5. Dwellers are vulnerable to drug abuse, alcoholism, crime, vandalism, escapism, apathy and social exclusion because of poverty.

#### **Land Degradation**

The limited availability and deterioration of quality of land, both are responsible to exert pressure on agricultural land. Soil erosion, water logging, salinisation and alkalinisation of land lead to land degradation which declines productivity of land. In simple words, temporary or permanent decline in productive capacity of the land is known as land degradation. All degraded land may not be considered as wasteland. But if process of degradation is not checked, then a degraded land may be converted into wasteland. Natural and man-made processes, both degrade the quality of land.

#### Classification of Wastelands

- National Remote Sensing Agency (NRSA) It is an organisation responsible for classification of wastelands in India. It classifies wastelands by using remote sensing techniques on the basis of the processes that have created them.
- Wasteland Caused by Natural Agents Gullied/ ravinous land, desertic or coastal sand, barren rocky areas, steep sloping land, glacial areas, etc are types of wastelands caused by the natural agents. These are considered as wastelands caused by natural agents.
- Wasteland Caused by Natural as well as Human Factors Water logged and marshy areas, land affected by salinity and alkalinity and land with and without scrubs which are degraded by the natural as well as human factors are included in this category.
- Wastelands Caused by Man-made Processes Shifting cultivation area, degraded land under plantation crops, degraded forests, degraded pastures and mining and industrial wastelands are some types of wastelands that are degraded because of human action.

#### **Very short answer type questions-(2 mark each)**

1. What is Swachh Bharat Mission?

**Ans-** The Swachh Bharat Mission (SBM) is part of the urban renewal mission launched by the Government

of India to improve the quality of life in urban slums.

- 1. In which town, do vehicles emit most carbon-monoxide? Answer:-Delhi.
- 2. Which is the main source of environmental pollution in India?

**Answer:**-Industries are the main source of environmental pollution in India.

**3.** Mention any two sources of water pollutants created by humans.

**Answer:-** Two sources of water pollutants created by humans are:

- 1. Sewage disposal
- 2. Toxic effluents from industries.
- **4.** Name two sources of Air Pollution.

**Answer:-** Volcanoes and industries.

**5.** Name a gas which depletes Ozone gas.

Answer:- CFC—Chlorofluorocarbon.

**6.** Classify pollution into three main types.

**Answer:-**Pollution can be classified into three categories on the basis of medium of transportation of the pollutants:

- 1. Air pollution
- 2. Water pollution
- 3. Land pollution.
- **7.** What is Smog?

**Answer: -**Smog is smoky fog in urban industrial cities when carbon dioxide freezes over smoke.

**8.** Name any two diseases that are caused by air pollution.

**Answer:** -Lung cancer and asthma are two diseases caused by air pollution.

9. Mention the root cause of 'acid rains'.

#### OR

Which source of pollution is responsible for acid rains.

**Answer:** Air pollution is responsible for acid rains. It is caused by a chemical reaction that begins when compound like Sulphur dioxide and nitrogen oxides are released into the air in the atmosphere. They mix and react with water molecules and oxygen to form acidic rain.

#### **Short Answer questions (3 marks ,Write any three points)**

#### Q.1 Write any six problems of slums of metropolitan cities in India-

**Ans.** (i)Lack of proper accommodation, light and sanitation facilities

- (ii)Lack of safety measures from fire and earthquake.
- (iii) Over crowded with population.
- (iv) Lack of medical facilities.
- (v) Narrow streets and lack of proper ventilation.
- (vi) Spread of epidemics in slums.

#### Q2. Write four problems regarding urban waste disposal in India.

Ans. (i) Lack of proper place for dumping of urban waste material.

- (ii) Throwing of industrial waste into rivers, which in turn increases water pollution.
- (iii) Soil pollution is caused due to uncontrolled chemical seepage in the ground.
- (iv) Fear of spreading diseases due to air pollution and bad smell from urban waste.

#### Q3. Mention major problems associated with urban waste disposal in India.

**Ans.** 1.Growing population

- 2. Slow administrative action
- 3. Growing consumerism.
- 4. Casual attitude towards cleanliness.
- 5. Unscientific disposal Management.
- 6. Problem of Water pollution.
- 7. Loss of health

# Q.4 In how many categories is pollution divided on the basis of medium through which pollutants are transported?

**Ans-** There are many types of pollution on the basis of medium through which pollutants are transported and diffused:

- Air pollution
- Water pollution
- Land pollution
- Noise pollution

#### Q5. What do you mean by water pollution?

**Ans-**Deterioration in quality of water due to presence of waste, toxic chemicals, etc. water becomes unfit for use. They are difficult to remove by standard purification measures. Fluorides, e-coli from wastes are examples of water pollution.

#### Q 6. What is the main sources of water pollution?

**Ans-** Water pollutants are created by natural sources like -soil erosion, landslides, decay and decomposition of plants and animals etc.

But the main pollutants come from human sources which includes -polluting the water through industrial, agricultural and cultural activities. Human causes are the real causes of concern.

#### Q 7. What is meant by air pollution?

**Ans**- Air pollution is taken as addition of contaminants like dust, fumes, gas, fog, odor, smoke or vapour to the air in substantial proportion and duration that may be harmful to flora and fauna and to property.

#### Q 8. Name the diseases caused by air pollution.

**Ans**- It causes various respiratory diseases like asthma, sore throat, sneezing, allergic rhinitis, smoky fog over the cities commonly known as smog prevails which may lead to accidents.

#### Q 9-What do you mean by noise pollution?

**Ans-** Noise pollution refers to the state of unbearable and uncomfortable to human beings which is caused by noise from different sources. The level of steady noise is measured by sound level expressed in terms of decibel (dB).

#### Q 10.-Which physical disorders take place due to noise pollution?

Ans-Hearing problems, headache, anxiety, irritation, depression, digestive disorder, etc.

#### Q 11. What health problems are caused by solid waste?

**Ans-**Solid wastes cause health hazard through creation of obnoxious smell, and harbouring of flies and rodents, which act as carriers of diseases like typhoid, diphtheria, diarrhea, malaria and cholera, etc.

#### Q 12-What are the main causes of migration from rural area to urban area?

**Ans-** Population flow from rural to urban areas is caused by many factors:

- High demand for labour in urban areas.
- Low job opportunities in rural areas.
- Imbalanced pattern of development between urban and rural areas.

#### Q13.What do you mean by slums?

**Ans-** "Slums", jhuggi-jhopari" are clusters and colonies of shanty structures. These are inhabited by those people who were forced to migrate from the rural areas to these urban centers in search of livelihood but could not afford proper housing due to high rent and high costs of land. They occupy environmentally unfriendly areas.

#### Q14-What do you mean by land degradation?

**Ans-** Land degradation is generally understood either as a temporary or a permanent decline in productive capacity of the land.

## Q 15.-Which human action brings reduction in land productivity? Ans-

- 1. Shifting cultivation area,
- 2.degraded land under plantation crops,

- 3. degraded forests,
- 4.degraded astures, and mining and industrial wastelands, are causes of land degradation by human action.

# Q 16. What per cent of agricultural land in India is barren and uncultivable waste and degraded land?

**Ans.**-17.98% of total geographical area of land in India is barren and uncultivable waste and degraded land for which natural and human actions are responsible.

#### Q.17 Describe the problem of Slums in India.

**Ans**. 1. Dilapidated houses

- 2. Poor hygienic conditions
- 3. Lack of light & drinking water facilities.
- 4. Lack of toilet facilities.
- 5. Poor ventilation
- 6. Low paid and high risk works.
- 7. Lack of proper education
- 8. Malnutrition and Under Nutrition
- 9. Vulnerable to crime & drug abuse.
- 10 Vulnerable to social exclusion

## Q.18 What is the difference between pollution and pollutants? Ans

Pollution	Pollutant
narmful substances in the atmosphere in substantial amount over a considerable	(i) Pollutants are the substances which are unwanted, and harmful. They make the environment polluted.
	(ii) They degrade the quality of the environment.
(iii)Pollution is caused by pollutants.	(iii) Addition of pollutants is the cause of pollution.

#### Q.19 Describe the major source of air pollution.

**Answer:** Combustion of coal, petrol and diesel, industrial processes, solid waste disposal, sewage disposal, etc. are the major sources of air pollution because they add oxides of sulfur, oxides of nitrogen, carbon monoxide, hydro-carbons, ammonia, lead aldehydes, asbestos and helium in the atmosphere.

**Q.20 Mention major problems associated with urban waste disposal in India. Answer:** Solid waste refers to a variety of old and used articles, For example stained small pieces of metals, broken glassware, plastic containers, polythene bags, ashes, floppies, CD's, etc. dumped at different places.

Environmental pollution by solid wastes has now got significance because of enormous growth in the quantity of wastes generated from various sources. The huge turn out of ashes and debris from industries, thermal power houses and building constructions or demolitions have posed problems of serious consequences. Solid wastes cause health hazard through creation of obnoxious smell, and harboring of flies and rodents, which act as carriers of diseases like typhoid, diphtheria, diarrhea, malaria and cholera, etc.

These wastes cause frequent nuisance as and when these are carelessly handled, spread by wind and splittered through rain water. Concentration of industrial units in and around urban centres gives rise to disposal of industrial wastes.

The dumping of industrial waste into rivers leads to water pollution. River pollution from city-based industries and untreated sewage leads to serious health problems downstream. 50 per cent of the waste generated are left uncollected which accumulate on streets, in open spaces between houses and in wastelands leading to serious health hazards.

Untreated wastes ferment slowly and release toxic biogas to the atmosphere, including methane. Land is limited in urban centres so looking for landfill to dump the waste generated in urban centres is a major problem.

#### **Long Type Answer Questions.** (5marks,write any 5 points)

#### Q.1 Describe the nature of water pollution in India.

**Ans-** Water pollution is addition of unwanted and harmful material in the water which renders it harmful for the use of human and degrades the flora and fauna around it.

- 1. Indiscriminate use of water by increasing population and industrial expansion has led degradation of the quality of water considerably. Surface water available from rivers, canals, lakes, etc. is never pure. It contains small quantities of suspended particles, organic and inorganic substances. When concentration of these substances increases, the water becomes polluted, and hence becomes unfit for use. In such a situation, the self-purifying capacity of water is unable to purify the water.
- 2. Water pollutants are also created from natural sources (erosion, landslides, decay and decomposition of plants and animals, etc.). Pollutants from human sources are the real causes of concern. Human beings pollute the water through Industrial, agricultural and cultural activities.
- 3. Industry is the most significant contributor. Industries produce several undesirable products including industrial wastes, polluted waste water, poisonous gases, chemical residuals, numerous heavy metals, dust, smoke, etc.
- 4. Most of the industrial wastes are disposed off in running water or lakes. Consequently, poisonous elements reach the reservoirs, rivers and other water bodies, which destroy the bio-

system of these waters. Major water polluting industries are leather, pulp and paper, textiles and chemicals.

- 5. Various types of chemicals used in modern agriculture such as inorganic fertilisers, pesticides and herbicides are also pollution generating components. These chemicals are washed down to rivers, lakes and tanks. These chemicals also infiltrate the soil to reach the ground water. Fertilizer induces an increase in the nitrate content of surface waters.
- 6. Cultural activities such as pilgrimage, religious fairs, tourism, etc. also cause water pollution. In India, almost all surface water sources are contaminated and unfit for human consumption. Also the overutilization of groundwater resources in India has led to groundwater depletion and also increased concentration of Arsenic in many parts of West Bengal and Bihar.

7.Domestic waste which includes sewage and other household waste also adds on to the pollution of water. Water pollution is a source of various water borne diseases. The diseases commonly caused due to contaminated water are diarrhea, intestinal worms, hepatitis, etc. World Health Organisation shows that about one-fourth of the communicable diseases in India are water-borne.

#### Q.2 Describe the problem of slums in India.

**Ans-** Urban centers in India are more differentiated in terms of the .social-economic, politico-cultural and other indicators of development than any other areas.

They represent social-economic disparities of highest order. On one hand are the highly posh areas with huge farm houses, wide roads, entertainment center and all amenities required for leading a luxurious life, on the other hand are the slum clusters, generally referred to as "jhuggi- jhopris-clusters and colonies of shanty structures.

Those people who were forced to migrate from the rural areas to these urban centers in search of livelihood but could not afford proper housing due to high rent and high costs of land inhabit these slums. They occupy environmentally incompatible and degraded areas.

Slums are residential areas of the least choice, dilapidated houses, poor hygienic conditions, poor ventilation, lack of basic amenities like drinking water, light and toilet facilities, etc. These areas are overcrowded having narrow street pattern prone to serious hazards from fire.

Moreover, most of the slum population works in low paid, high risk-prone, unorganised sectors of the urban economy. Consequently, they are the undernourished, prone to different types of diseases and illness and can ill afford to give proper education to their children. The poverty makes them vulnerable to drug abuse, alcoholism, crime, vandalism, escapism, apathy and ultimately social exclusion.

Dharavi, which is the second largest slum of Asia, shows the extreme miserable and unhygienic conditions of existence. The area is devoid of sanitation and is infested by pests such as rats, causing miserable health conditions of the residents. The lanes of the slum are

not wide enough to let a bicycle pass through them. People inhabiting the slum face chronic diseases- both communicable and the ones caused by deficiencies.

The lack of employment opportunities in the rural as well as urban areas of developing nations consistently pushes the population to urban areas.

The enormous migrant population generates a pool of unskilled and semi skilled labour force, which is already saturated in urban areas. People coming to the slums are affected by the several ills which cities of developing countries face. The available social and economic infrastructure is unable to absorb the additional population.

Lack of education, employment and male selective migration tends to increase the crime rates. Due to failing infrastructure, people living in slums are devoid of minimum required quantity of potable water. An improper sewage system creates unhealthy conditions. Massive use of traditional fuel severely pollutes the air.

#### Q. 3 Suggest measures for reduction of land degradation.

**Ans-** The pressure on agricultural land increases not only due to the limited availability but also by deterioration of quality of agricultural land. Soil erosion, water logging, Stalinization and alkalinisation of land lead to land degradation. Though all degraded land may not be wasteland, but unchecked process of degradation may lead to the conversion to wasteland.

There are two processes that induce land degradation. This are-

#### Natural and created by human beings:-

National Remote Sensing Agency (NRSA) has classified wastelands by using remote sensing techniques and it is possible to categorize these wastelands according to the processes that have created them. Some degradation which is caused by natural agents cannot be stopped altogether, but the degraded land can be revived through reclamation processes.

Land degradation like gullied/ ravenous land, desert or coastal sands, barren rocky areas, steep sloping land, and glacial areas are primarily caused by natural agents. There are other type of degraded land such as waterlogged and marshy areas, land affected by salinity and alkalinity and land with or without scrub, which have largely been caused by natural as well as human factors. There are some other types of wastelands such as degraded shifting cultivation area, degraded land under plantation crops, degraded forests, degraded pastures, and mining and industrial wastelands, are caused by human actions.

Land degradation caused by human activities can be controlled by regulating and improving land use practices. Shifting agriculture and open grazing causes a large area of land to be degraded, therefore shifting cultivation and open grazing should be strictly banned. Regulations on use of fertilizers and other chemicals on the agricultural land should be strengthened. Mining activities, deforestation all leads to land degradation, therefore government needs to put strict checks on these practices. The best way to put a check on the land degradation and land revival is by educating the inhabitants of the area and having community based programmes aimed at checking land degradation and reviving the degraded land. Under the various schemes of governments and aid of NGOs the community is organized in such a way to use sustainable and organic agricultural practices.

Common property resource is revitalized, and its use is promoted. Planting patches of fodder grass so as to limit open grazing is a crucial step to curtail land degradation. Social fencing of the land leads to feeling of responsibility among the people and therefore protection of land. Therefore community participation with public- government participation is the best method to contain land degradation. The best example from India for revival of degraded land is of the Jhabua district in the westernmost agro-climatic zone of Madhya Pradesh.

# Q 4.In how many categories is pollution divided on the basis of medium through which pollutants are transported?

**Ans-**There are many types of pollution on the basis of medium through which pollutants are transported and diffused:

- 1. Air pollution
- 2. Water pollution
- 3. Land pollution
- 4. Noise pollution

#### Q. 5 What are the effects of air pollution on human health?

**Ans.** Air pollution is taken as addition of contaminants like dust, fumes, gas, fog, odor, smoke or vapour to the air in substantial proportion and duration that may be harmful to flora and fauna and to property.

It causes various diseases related to respiratory, nervous and circulatory systems. Smoky fog over cities called as urban smog is caused by atmospheric pollution.

It proves very harmful to human health. It can also cause acid rain.

# Q.6 What do you know about 'Namami Gange Programme'? What are its main objectives?

**Ans.** Namami Gange Programme, as a river, has national importance but the river requires cleaning by effectively controlling the pollution for its water. The Union Government has launched the 'Namami Gange Programme' with the following objectives:

- Developing sewerage treatment systems in towns,
- Monitoring of industrial effluents,
- Development of river front,
- Afforestation along the bank of increase biodiversity,
- Cleaning of the river surface,
- Development of 'Ganga Grams' in Uttarakhand, UP, Bihar, Jharkhand and West Bengal, and
- Creating public awareness to avoid adding pollutants in to the river even in the form of rituals.

#### **SOURCE BASED QUESTION**

#### 1. Read the Case Study given below and answer the questions that follow:

#### **DHARAVI-ASIA'S LARGEST SLUM**

Buses merely skirt the periphery. Auto rickshaws cannot go there, Dharavi is part of central Bombay where three wheelers are banned. Only one main road traverses the slum, the miscalled 'ninety-foot road', which has been reduced to less than half of that for most of its length. Some of the side alleys and lanes are so narrow that not even a bicycle can pass. The whole neighborhood consists of temporary buildings, two or three storied high with rusty iron stairways to the upper part, where a single room is rented by a whole family, sometimes accommodating twelve or more people; it is a kind of tropical version of the industrial dwelling of Victorian London's East End.

But Dharavi is a keeper of more somber secrets than the revulsion it inspires in the rich; revulsion, moreover, that is, in direct proportion to the role it serves in the creation of the wealth of Bombay. In this place of shadow less, treeless sunlight, uncollected garbage, stagnant pools of foul water, where the only non-human creatures are the shining black crows and long grey rats, some of the most beautiful, valuable and useful articles in India are made. From Dharavi come delicate ceramics and pottery, exquisite embroidery and zari work, sophisticated leather goods, high-fashion garments, finely-wrought metalwork, delicate jewellery settings, wood carvings and furniture that would find its way into the richest houses, both in India and abroad...

Dharavi was an arm of the sea that was filled by waste, largely produced by the people who have come to live there: Scheduled Castes and poor Muslims. It comprises rambling buildings of corrugated metal, 20 meters high in places, used for the treatment of hides and tanning. There are pleasant parts, but rotting garbage is everywhere..."

#### Answer any three questions

1. Dharavi is the largest slum of which continents?

Answer- Asia

**2.** How many people are living in a room in Dharavi?

Answer- 12 or more people

**3.** Who are the main population of the above slum?

Answer- Schedule Castes and Muslim

**4.** Which of the following things are producing by the skilled workers in Dharavi?

Answer-Ceramics and pottery ,Embroidery and zari work,Sophisticate leather goods

#### Case Study: A Role Model to Restore the Ecology and Safeguard

#### **Human Health in Daurala**

Based on the universal law "Polluter pays", effort to restore the ecology and safeguard the human health with people's participation has taken place in Daurala near Meerut. These efforts are now bearing fruits after aspen of three years when Meerut based NGO had developed a model for ecological restoration. The meeting of the Daurala Industries officials, NGOs, Government officials and other stakeholders at Meerut has brought out results. The powerful logics, authentic studies and the pressure of people have brought a new lease of life to the twelve thousand residents of this village.

It was in the year 2003 that the pitiable condition of Dauralaites drew the attention of the civil society. The groundwater of this village was contaminated with heavy metals. The reason was that the untreated wastewater of Daurala industries was leaching to the groundwater table.

The NGO conducted a door to door survey of the health status of the residents and came out with a report. The organisation, the village community and people's representatives sat together to find out sustainable solutions to the health problem. The industrialists showed a keen interest towards checking the deteriorating ecology. The overhead water tank's capacity in the village was enhanced and a 900m extra pipeline was laid to supply potable water to the community. The silted pond of the village was cleaned and recharged by desilting it. Large quantity of silt was removed paving way to large quantity of water so that it recharged the aquifers. Rainwater harvesting structures have been constructed at different places which have helped in diluting the contaminants of the groundwater after the monsoons. 1000 trees have also been planted which have improved the environment.

Read the Case Study given below and answer the questions that follow:

**1.** Daurala is situated in which state?

**Answer.** Utter Pradesh

2. The groundwater of Daurala village was contaminated with..........

**Answer-** heavy metals

**3.** How many trees had planted to improve the environment?

**Answer-**1000 trees

**4.** Which one of the following conducted a door to door survey of the health status of the residents?

**Answer-** The NGO

#### **CASE STUDY**

Ramesh has been working in contract as a welder on construction site in Talcher (coal region of Odisha) for the last two years. He moved with the contractor to various places like Surat, Mumbai, Gandhi Nagar, Bharuch, and Jamnagar and so on. He remits Rs. 20,000 per year to his father in his native village. The remittances have been mainly used for daily consumption, healthcare, schooling of children, etc. Part of the money is also used in agriculture, purchasing of land and building of houses, etc. The standard of living of Ramesh's family improved significantly. Fifteen years ago, the situation was not the same. The family was passing through very tough times. Three of his brothers and their families had to survive on three acres of land. The family was highly in debt. Ramesh had to discontinue his studies after ninth standard. He was further hard pressed when he got married.

Simultaneously, he was also impressed by some successful out-migrants of his village who had been working in Ludhiana and supporting their families in village by sending money and some consumer goods. Thus, due to abject poverty in the family and perceived job promises at Ludhiana, he made a move to Punjab with his friend. He worked there in a woolen factory for six months at the rate of only Rs. 20 per day in 1988. Apart from the crisis of managing his personal expenditure from this meager income, he was also facing difficulty in assimilation to the new culture and environment. Then he decided to change his place of work from Ludhiana to Surat under the guidance of his friend. He learnt the skills of welding in Surat and after that he has been moving to different places with the same contractor. Though the economic condition of Ramesh's family at village improved, he is bearing the pain of separation of his near and dear ones. He cannot shift them with him, as the job is temporary and transferable.

#### Read the Case Study given below and answer the questions that follow:

1. Talcher coal mines is located in which state?

Answer, Odisha

2. Woolen industry paid Ramesh Rs...... Per day.

Answer - Rs. 20

**3.** Which skill helped Ramesh to earn more income?

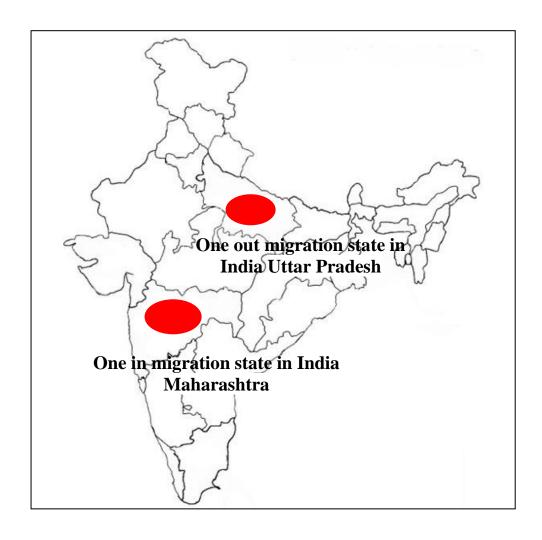
**Answer -** Welding

**4.** Ramesh studied up to which class?

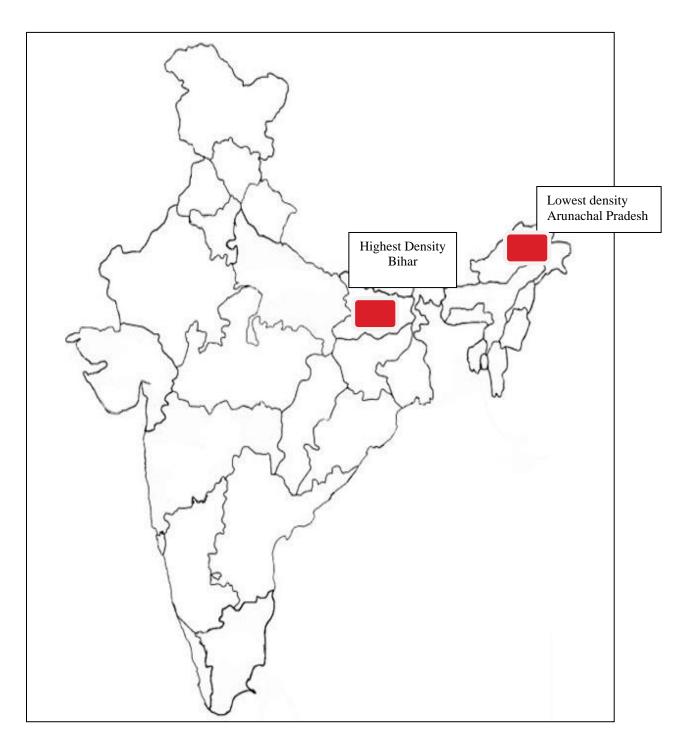
**Answer-** 9<sup>th</sup> class

# **MAP PRACTICE**

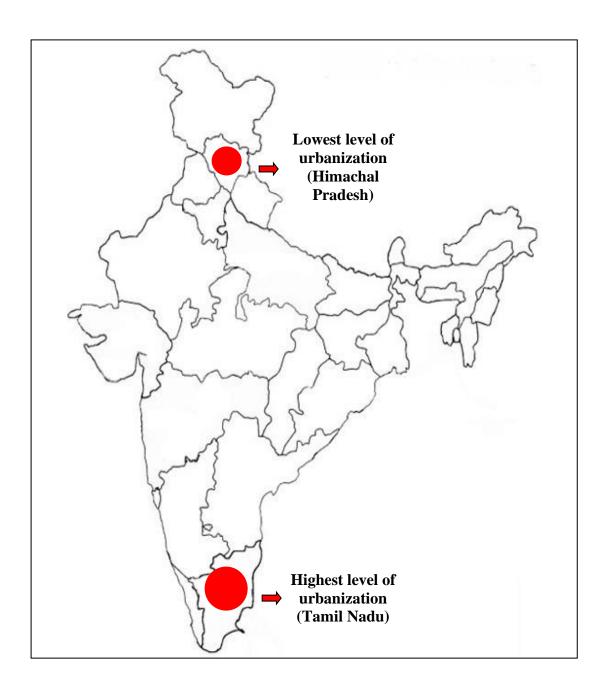
One out migration state in India & One in migration state in India



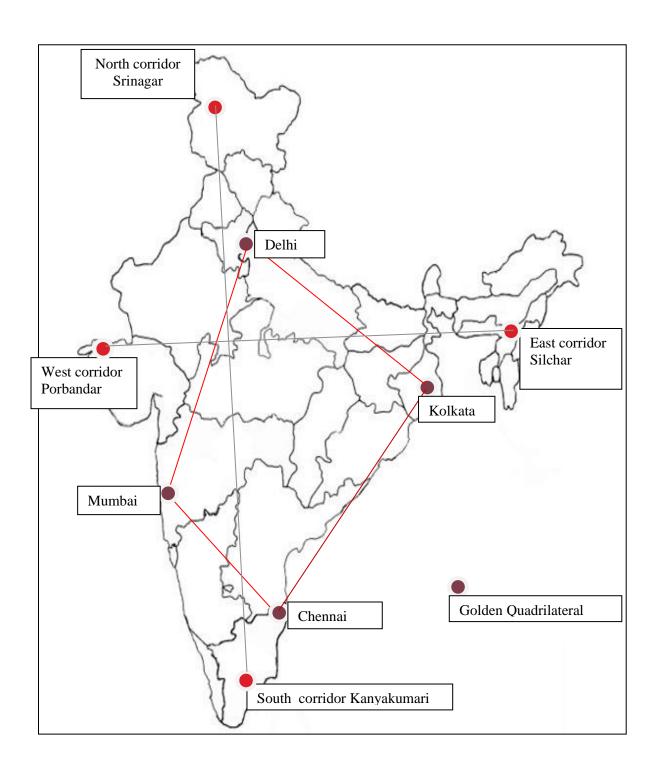
# HIGHEST AND LOWEST POPULATIUON DENSITY STATE OF INDIA



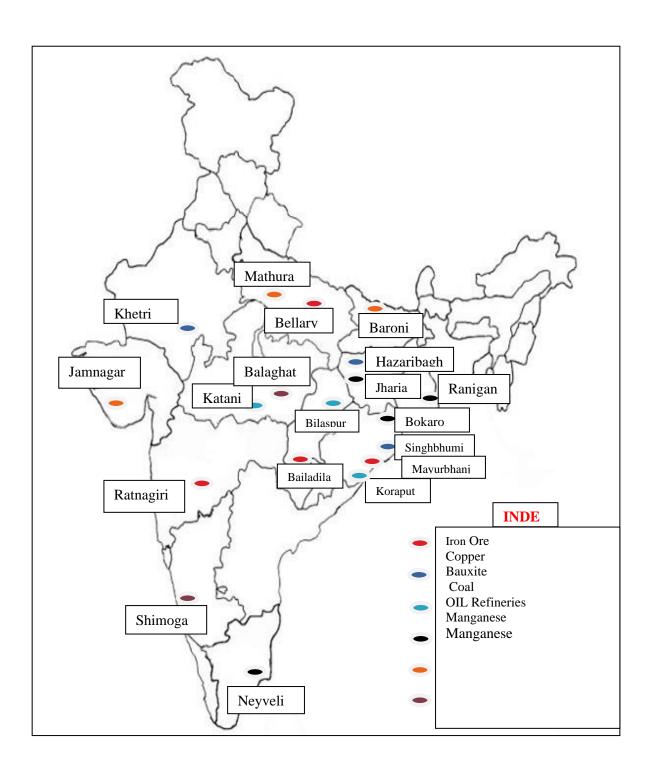
# State with highest level of urbanization and lowest level of urbanization



### MAP TRANSPORT



# Mines Map



# SAMPLE QUESTION PAPER (2021-22)

# SAMPLE QUESTION PAPER (2021-22) GEOGRAPHY (029) TERM II CBSE CLASS 12

Time: 2 Hrs. Max. Marks 35

#### **GENERAL INSTRUCTIONS**

- I. Question paper is divided into 5 sections A ,B,C,D&E
- II. In section A question number 1 to 3 are Very Short Answer type questions. Attempt any 3 questions.
- III. In section B question number 4 is Source based question.
- IV. In section C question number 5 & 6 are Short Answer based questions.
- V. In section D question number 7 to 9 are Long Answer based questions.
- VI. In section E question number 10 is a Map based question.

#### **SECTION A (VSA)**

#### Attempt all questions

2x3=6

- Q.1. Explain the prominent features of Traditional Large Scale industrial regions.
- Q.2. Define Tertiary Activities.
- Q.3. Differentiate between retail trading and wholesale trading.

 $\cap R$ 

Differentiate between departmental stores and chain stores.

#### **SECTION B (SOURCE BASED QUESTION)**

#### Q.4. 'Manufacturing Industry'

3x1=3

Manufacturing literally means 'to make by hand'. However, now it includes goods 'made by machines'. It is essentially a process which involves transforming raw materials into finished goods of higher value for sale in local or distant markets. Conceptually, an industry is a geographically located manufacturing unit maintaining books of accounts and records under a management system. As the term industry is comprehensive, it is also used as synonymous with 'manufacturing'. When one uses terms like 'steel industry' and 'chemical industry', one thinks of factories and processes. But there are many secondary activities which are not carried on in factories such as what is now called the 'entertainment industry' and 'Tourism industry', etc. So for clarity, the longer expression 'manufacturing industry' is used.

Attempt all questions

- 4.1. What do you understand by the term Manufacturing?
- 4.2. "Manufacturing involves value addition." Explain with any one suitable example.
- 4.3. Name two industries which provide services rather than production of goods.

#### SECTION C (SHORT ANSWER)

Ouestion no. 5 & 6 2x3=6

Q.5. Road transport plays a vital role in the promotion of trade and tourism in the world. Support this statement with three suitable arguments.

Q.6. Satellites and computers have brought revolutionary changes in the present life of the people. Elaborate the statement with three suitable examples.

 $\cap R$ 

Evaluate the role and importance of roads in the economic development of India?

#### SECTION D (LONG ANSWER)

Question no. 7 to 9 3x5=15

- Q.7. How do Quaternary services differ from Tertiary services? Give three reasons why the service sector in developing and developed countries is growing faster than the manufacturing sector?
- Q.8. How is the use of plastic bags harmful for environmental degradation? Evaluate it by citing suitable reasons.

OR

The disposal of urban waste has become a serious concern for the local authorities. Analyze the statement with suitable examples.

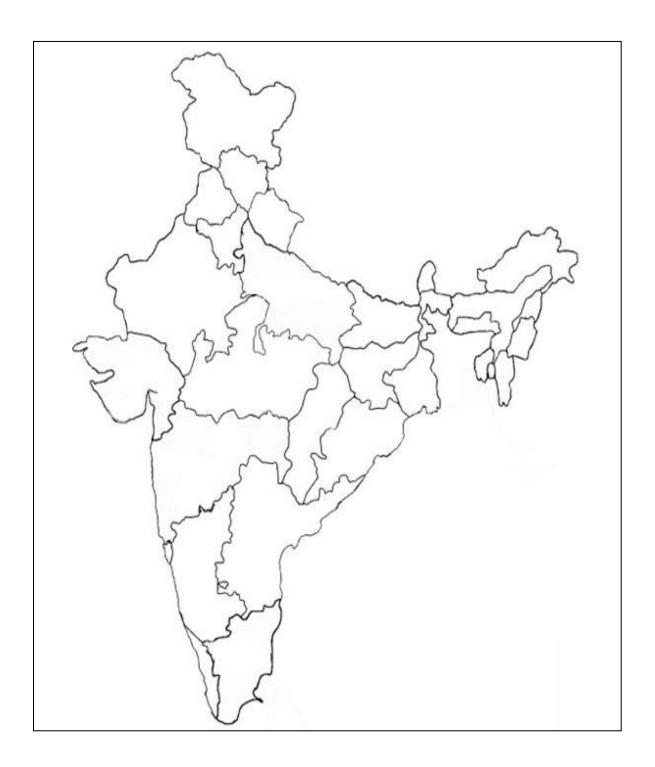
Q.9. Attaining Sustainable development in the command area requires major thrust upon the measures to achieve ecological sustainability. Highlight the measures proposed to promote sustainable development in the command area of Indira Gandhi Rajasthan Canal.

#### **SECTION E (MAP)**

- Q. 10. On the outline map of India indicate and mark the following features (Attempt any 5). 1x5=5
- a) Iron ore mines of Chhattisgarh
- b) Oil Refinery located in Uttar Pradesh.
- c) The largest Lignite coal mines.
- d) Easternmost terminal of East-West Corridor
- e) Southernmost Metropolitan city connected by Golden Quadrilateral.
- f) Oldest Copper mines of Rajasthan

For visually impaired students in lieu of Question no. 10 (Attempt any 5). 1x5=5

- a) Name an important Iron Ore mine of Chhattisgarh.
- b) An important Oil Refinery located in Uttar Pradesh
- c) Where is the largest Lignite coal mine, located in India and what is the name of that mine?
- d) Write down the name of Eastern most terminal of East-West Corridor
- e) Which is the Southernmost Metropolitan city connected by the Golden Quadrilateral?
- f) What is the name of the Oldest Copper mines of Rajasthan?



### MARKING SCHEME GEOGRAPHY (029) TERM II CBSE CLASS 12

Time: 2 Hrs. Max. Marks 35

#### **GENERAL INSTRUCTIONS**

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- III. In section B question number 4 is Source based question.
- IV. In section C question number 5 & 6 are Short Answer based questions.
- V. In section D question number 7 to 9 are Long Answer based questions.
- VI. In section E question number 10 is a Map based question.

#### **SECTION A (VSA)**

#### Attempt all questions 2x3=6

- Q.1. Traditional industrial regions can be recognized by:
- High proportion of employment in manufacturing industry. High-density housing, often of inferior type, and poor services. Unattractive environment, for example, pollution, waste heaps, and so on.
- Problems of unemployment, emigration and derelict land areas caused by closure of factories.
- Q.2. Tertiary activities involve the commercial output of services rather than the production of tangible goods. Common examples are the work of a plumber, electrician, technician, launderer, barber, shopkeeper, driver, cashier, teacher, doctor, lawyer and publisher etc.
- Q.3. The business activities concerned with the sale of goods directly to the consumers known as retail trading, while wholesale trading constitutes bulk business through numerous intermediary merchants.

Departmental stores delegate the responsibility and authority to departmental heads for purchasing of commodities, while chain stores are able to purchase merchandise most economically, often going so far as to direct the goods to be manufactured to their specifications.

#### SECTION B (SOURCE BASED QUESTION)

#### Q.4. 'Manufacturing Industry' 3x1=3

Manufacturing literally means 'to make by hand'. However, now it includes goods 'made by machines'. It is essentially a process which involves transforming raw materials into finished goods of higher value for sale in local or distant markets. Conceptually, an industry is a geographically located manufacturing unit maintaining books of accounts and records under a management system. As the term industry is comprehensive, it is also used as synonymous with 'manufacturing'. When one uses terms like 'steel industry' and 'chemical industry', one thinks of factories and processes. But there are many secondary activities which are not carried on in factories such as what is now called the 'entertainment industry' and 'Tourism industry', etc. So for clarity, the longer expression

'manufacturing industry' is used. Attempt all questions

- 4.1) Manufacturing literally means 'to make by hand'. However, now it includes goods 'made by machines'.
- 4.2) It is essentially a process which involves transforming raw materials into finished goods of higher value. Example; Raw cotton is transformed to more valuable threads and then threads are further transformed into more valuable fabric.(Any other relevant example)
- 4.3) The 'entertainment industry' and 'Tourism industry'

#### **SECTION C (SHORT ANSWER)**

Question no. 5 & 6 2x3=6

Q.5. Transport is a service or facility by which people, materials and manufactured goods are physically carried from one location to another.

It is an organized industry created to satisfy man's basic need of mobility.

Modern society requires speedy and efficient transport systems to assist in the production, distribution and consumption of goods.

At every stage in this complex system, the value of the material is significantly enhanced by transportation.

The opening-up of tourist areas has been aided by improvement in transport facilities. Travel is easier by car, with better road systems.

Q.6. Satellites touch human lives in many ways. Every time we use a cell phone to call a friend, send an SMS or watch a popular programme on cable television, we are using satellite communication.

These have rendered the unit cost and time of communication invariant in terms of distance.

Today weather forecasting through television is a boon in saving the loss of life and property.

As billions use the Internet each year, cyberspace will expand the contemporary economic and social space of humans through email, e-commerce, e-learning and e-governance.

The Internet together with fax, television and radio will be accessible to more and more people cutting across place and time.

It is these modern communication systems, more than transportation that has made the concept of global village a reality

OR

India has the 2nd largest road network in the world. Importance of Roadways in India:

- 1. It provides better connectivity between Rural and Urban areas and hence advancement of Rural India occurs.
- 2. During the transportation of goods from ports to their destination it is very important to have better Road connectivity so that time, fuel and money can be saved and hence ultimate economic development occurs.
- 3. To link every remotest area (J&K, Northeast part, mountainous regions etc) with the mainstream of economy it's very much important to have better connectivity so that overall development of those people can be ensured.
- 4. Even road connectivity is very important in linking Intra-state Urban areas and Inter-states for

better transportation of various goods and services and hence for overall development in terms of saving time, money etc and reduction in pollution and CO2 emission level.

- 5. Rural economy would be connected with urban economy.
- 6. Faster accessibility of health, education and other facilities.
- 7. Import and export will improve.
- 8. Internal security will improve. If it is improved in North Eastern states and militancy affected areas.
- 9. Social connectivity will improve.

(Any three relevant points)

#### SECTION D (LONG ANSWER)

Question no. 7 to 9 3x5=15

Q.7. The activities which involve intangible outputs and are relatively attached from material production such as the services of a technician or a teacher are referred to as Tertiary activities.

The activities concerning knowledge such as education, information, research and development and more intellectual activities where the major task is to think, research and develop ideas are quaternary activities.

The rising per capita income in both, developed and developing countries has generated proportionately larger increases in the many kinds of services.

There is also demand for educational services at all levels with the increase in the demand for literacy and computer skills at the workplace.

Demand for non-direct production workers is also increasing proportionally in most manufacturing companies as these companies need more clerical staff, sales people, research and other workers.

Medical services have also increased in Europe, North America and Japan because of an increase in demand for medical care from the elderly population.

The increasing value of time has led to more household functions being accomplished outside of home.

Q.8. Plastic is a non-biodegradable substance and its use and production should be minimum. Plastic debris is found absolutely everywhere, from the Arctic to Antarctica. It clogs street drains in our cities; it litters campgrounds and national parks, and is even piling up on Mount Everest. But thanks to runoff, and to our fondness for directly dumping our trash into the nearest river or lake, plastic is growing increasingly common in the world's oceans. When plastics are broken down, this simply means one large piece of plastic is reduced into a bunch of smaller pieces of plastic. These smaller pieces of plastic can be consumed by smaller animals, but are still indigestible. It affects all organisms in the food chain from tiny species like plankton through to whales. Toxins work their way up the food chain when plastic is ingested and can even be present in the fish people eat. From cell phones to bicycle helmets to IV bags, plastic has molded society in ways that make life easier and safer. But the synthetic material also has left harmful imprints on the environment.

- Chemicals added to plastics are absorbed by human bodies. Some of these compounds have been found to alter hormones or have other potential human health effects.
- Plastic debris, laced with chemicals and often ingested by marine animals, can injure or poison wildlife
- Floating plastic waste, which can survive for thousands of years in water, serves as mini transportation devices for invasive species, disrupting habitats.
- Plastic buried deep in landfills can leach harmful chemicals that spread into groundwater.
- Around 4 percent of world oil production is used as a feedstock to make plastics, and a similar

amount is consumed as energy in the process.

OR

The problem of overcrowded, congested and insufficient infrastructure of urban areas results in accumulation of huge urban waste. There are two sources of urban waste. Household or domestic sources and industrial or commercial sources. The mismanagement of urban waste disposal is a serious problem in big cities.

Tons of waste come out daily in metropolitan cities and are burnt. The smoke released from the waste pollutes the air. Lack of sewers or other means to dispose of human excretes safely and the inadequacy of garbage collection sources adds to water pollution.

The concentration of industrial units in and around urban centres gives rise to a series of environmental problems.

Dumping of industrial waste into rivers is the major cause of water pollution. The solid waste generation continues to increase in both absolute and per capita in cities.

This improper disposal of solid waste attracts rodents and flies which spread diseases. The thermal plants release a lot of smoke and ash in the air. For example, a plant producing 500mw electricity releases 2000 tons of ash which is difficult to manage.

- Q.9. Seven measures proposed to promote sustainable development in the command area are meant to restore ecological balance.
- (i) The first requirement is strict implementation of water management policy. The canal project envisages protective irrigation in Stage-I and extensive irrigation of crops and pasture development in Stage-II.
- (ii) In general, the cropping pattern shall not include water intensive crops. It shall be adhered to and people shall be encouraged to grow plantation crops such as citrus fruits.
- (iii) The CAD programmes such as lining of water courses, land development and leveling and warabandi system (equal distribution of canal water in the command area of outlet) shall be effectively implemented to reduce the conveyance loss of water.
- (iv) The areas affected by water logging and soil salinity shall be reclaimed.
- (v) The eco-development through afforestation, shelterbelt plantation and pasture development is necessary particularly in the fragile environment of Stage-II.
- (vi) The social sustainability in the region can be achieved only if the land allottees having poor economic background are provided adequate financial and institutional support for cultivation of land.
- (vii) The economic sustainability in the region cannot be attained only through development of agriculture and animal husbandry. The agricultural and allied activities have to develop along with other sectors of the economy. This shall lead to diversification of economic base and establishment of functional linkages between basic villages, agro-service centers and market centers.

(Any five points)

#### **SECTION E (MAP)**

- Q. 10. On the outline map of India indicate and mark the following features (Attempt any 5). 1x5=5
- a) Iron ore mines located in Southern most part of Chhattisgarh (Bailadila)
- b) Oil Refinery located in Uttar Pradesh.(Mathura)
- c) The largest Lignite coal mines.(Neyveli)
- d) Easternmost terminal of East-West Corridor.(Silchar)

- e) Southern Metropolitan city connected by Golden Quadrilateral. (Chennai)
- f) Oldest Copper mines of Rajasthan (Khetri)
  For visually impaired students in lieu of Question no. 10 (**Attempt any 5**). **1x5=5**
- a) Name an important Iron Ore mine of Chhattisgarh. (Bailadila)
- b) An important Oil Refinery located in Uttar Pradesh (Mathura)
- c) Where is the largest Lignite coal mine, located in India and what is the name of that mine? (Tamil Nadu, Neyveli)
- d) Write down the name of the Eastern most terminal of the East-West Corridor. (Silchar)
- e) Which is the Southernmost Metropolitan city connected by the Golden Quadrilateral? (Chennai)
- f) What is the name of the Oldest Copper mines of Rajasthan? (Khetri)



# Blueprint for Question Paper of Geography for term-II 2021-22 (Class 12<sup>th</sup> ) SET- 1

Book Name	C h N o	Chapter Name	Mark Assigne d	2 Marks Questio ns	Sourc e Base d 3 Mark s	3 Marks Questio ns	5 Marks Questio ns	Total
Fundament als of Human Geography	6	Secondary Activities	10				1	5
	7	Tertiary Activities	10	1	1			5
	8	Transport and Communicati on	5	1		1		5
India People & Economy	7	Mineral and Energy Resources		1				2
	9	Planning and Sustainable Development in Indian Cont.	7				1	5
	10	Transport and Communicati on	5				1	5
	12	Geographical Perspective on selected Issues and Problems	3			1		3
Maps from India			5					5
Total			35	3	1	2	3	35

# SAMPLE QUESTION PAPER (2021-22) GEOGRAPHY (029) TERM II SET-1 CLASS 12

Time: 2 Hrs. Max. Marks 35

#### GENERAL INSTRUCTIONS - ( सामान्य निर्देश)

- I. Question paper is divided into 5 sections A ,B,C,D&E
- प्रश्न पत्र 5 खंडों ए, बी, सी, डी और ई में बांटा गया है
- II. In section A question number 1 to 3 are Very Short Answer type questions. Attempt any 3 questions.
- ा. खंड ए में प्रश्न संख्या 1 से 3 अति लघु उत्तरीय प्रकार के प्रश्न हैं। कोई 3 प्रश्न हल करें।
- III. In section B question number 4 is Source based question.
- III. खंड बी में प्रश्न संख्या 4 स्रोत आधारित प्रश्न है।
- IV. In section C question number 5 & 6 are Short Answer based questions.
- IV. खंड सी में प्रश्न संख्या 5 और 6 लघु उत्तर आधारित प्रश्न हैं।
- V. In section D question number 7 to 9 are Long Answer based questions.
- v. खंड D में प्रश्न संख्या 7 से 9 दीर्घ उत्तरीय प्रश्न हैं।
- VI. In section E question number 10 is a Map based question.
- ∨ा. खंड ई में प्रश्न संख्या 10 एक मानचित्र आधारित प्रश्न है।

#### **SECTION A (VSA)**

Attempt all questions2x3=6सभी प्रश्लों का प्रयास करें

- Q.1. Why Iron and Steel industry is considered a basic Industry?
- प्रश्न 1. लोहा और इस्पात उद्योग को बुनियादी उद्योग क्यों माना जाता है?
- Q.2. Give the meaning of retail trading services.
- प्रश्न 2. खुदरा व्यापार सेवाओं का अर्थ बताइए।
- Q.3. What is the Golden Quadrilateral?
- प्रश्न 3. स्वर्णिम चतुर्भुज क्या है?

#### SECTION B (SOURCE BASED QUESTION)

#### Q.4. 'Manufacturing Industry'

3x1=3

प्रश्न ४. 'निर्माण उद्योग'

This has been one of the major industrial regions of Europe for a long time. Coal and iron and steel formed the basis of the economy, but as the demand for coal declined, the industry started shrinking. Even after the iron ore was exhausted, the industry remained, using

imported ore brought by waterways to the Ruhr.

The Ruhr region is responsible for 80 per cent of Germany's total steel production. Changes in the industrial structure have led to the decay of some areas, and there are problems of industrial waste and pollution. The future prosperity of the Ruhr is based less on the products of coal and steel, for which it was initially famous, and more on the new industries like the huge Opel car assembly plant, new chemical plants, universities. Outof-town shopping centers have appeared resulting in a 'New Ruhr' landscape.

यह लंबे समय से यूरोप के प्रमुख औद्योगिक क्षेत्रों में से एक रहा है। कोयला और लोहा और इस्पात ने अर्थव्यवस्था का आधार बनाया, लेकिन जैसे-जैसे कोयले की मांग घटती गई, उद्योग सिकुड़ने लगे। लौह अयस्क समाप्त होने के बाद भी, उद्योग बने रहे, रुहर में जलमार्ग द्वारा लाए गए आयातित अयस्क का उपयोग कर रहे थे।

रुहर क्षेत्र जर्मनी के कुल इस्पात उत्पादन के 80 प्रतिशत के लिए जिम्मेदार है। औद्योगिक संरचना में परिवर्तन के कारण कुछ क्षेत्रों का क्षय हुआ है, और औद्योगिक अपशिष्ट और प्रदूषण की समस्याएँ हैं। रुहर की भविष्य की समृद्धि कोयले और स्टील के उत्पादों पर कम आधारित है, जिसके लिए यह शुरू में प्रसिद्ध था, और विशाल ओपल कार असेंबली प्लांट, नए रासायनिक संयंत्रों, विश्वविद्यालयों जैसे नए उद्योगों पर अधिक। आउटऑफ़-टाउन शॉपिंग सेंटर दिखाई दिए हैं जिसके परिणामस्वरूप 'न्यू रुहर' परिदृश्य सामने आया है

Q.4.1. What is the name of the coal field and where it is located?

प्रश्न 4.1. कोयला क्षेत्र का नाम क्या है और यह कहाँ स्थित है?

Q.4.2. Which mineral has formed the basis of economic for this region?

प्रश्न 4.2. किस खनिज ने इस क्षेत्र के लिए आर्थिक आधार बनाया है?

Q.4.3. What kind of problem this region is facing?

प्रश्न 4.3। यह क्षेत्र किस तरह की समस्या का सामना कर रहा है?

#### **SECTION C (SHORT ANSWER)**

Question no. 5 & 6 2x3=6

प्रश्न संख्या 5 और 6

Q.5. "India has one of the largest network of roads in the world." Support the statement with examples.

प्रश्न 5. "भारत के पास दिनया में सड़कों का सबसे बड़ा नेटवर्क है।" उदाहरण सहित कथन का समर्थन करें।

Q.6. Explain with examples any three major problems associated with urban waste disposal in India.

प्रश्न ६. भारत में शहरी अपशिष्ट निपटान से जुड़ी किन्हीं तीन प्रमुख समस्याओं को उदाहरण सहित समझाइए।

OR

What do you mean by 'Open Sky Policy 5?

' ओपन स्काई पॉलिसी 5' से आप क्या समझते हैं?

#### SECTION D (LONG ANSWER)

Ouestion no. 7 to 9 3x5=15

प्रश्न संख्या ७ से ९

Q.7. Which is the longest trans-continental railway of North America? Describe its any four features.

प्रश्न ७. उत्तरी अमेरिका का सबसे लंबा अंतरमहाद्वीपीय रेलवे कौन सा है? इसकी किन्हीं चार विशेषताओं का वर्णन कीजिए।

Q.8. What do you know about 'Namami Gange Programme'? What are its main objectives? प्रश्न 8. नमामि गंगे कार्यक्रम के बारे में आप क्या जानते हैं? इसके मुख्य उद्देश्य क्या हैं?

#### OR

What do you know about the Sustainable Development? How this term came to Light? सतत विकास के बारे में आप क्या जानते हैं? यह शब्द प्रकाश में कैसे आया?

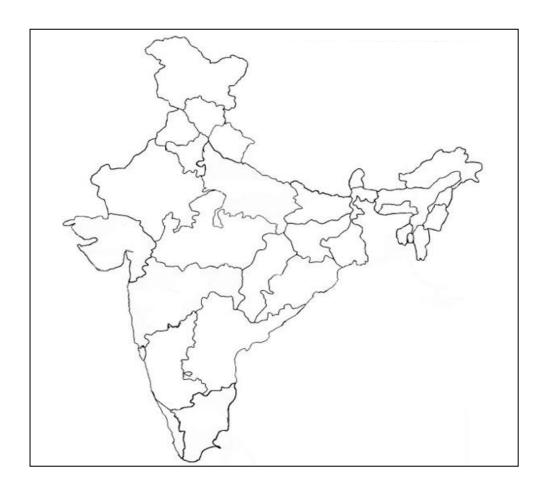
Q.9. Explain the locational factors of industries with the help of suitable examples. प्रश्न 9. उद्योगों के अवस्थिति कारकों को उपयुक्त उदाहरणों की सहायता से स्पष्ट कीजिए।

#### **SECTION E (MAP)**

## Q. 10. On the outline map of India indicate and mark the following features (Attempt any 5). 1x5=5

प्रश्न 10. भारत के रूपरेखा मानचित्र पर निम्नलिखित विशेषताओं को इंगित करें और चिह्नित करें (किसी भी 5 का प्रयास करें)।

- a) Bauxite mines of Katni.
- a) कटनी की बॉक्साइट खदानें।
- b) International Air port of Ahmedabad.
- b) अहमदाबाद का अंतर्राष्ट्रीय हवाई बंदरगाह।
- c) The largest Lignite coal mines.
- c) सबसे बडी लिग्नाइट कोयला खदानें।
- d) Major Sea Port of Marmagao.
- d) मर्मगाओं का प्रमुख समुद्री बंदरगाह।
- e) Software Technology Park of Bengaluru.
- e) बेंगलुरु का सॉफ्टवेयर टेक्नोलॉजी पार्क।
- f) Cotton Textile of Surat.
- च) सूरत का सूती कपड़ा।



### MARKING SCHEME GEOGRAPHY (029) TERM II SET-1 CLASS 12

Time: 2 Hrs. Max. Marks 35

#### **GENERAL INSTRUCTIONS-**

- I. Question paper is divided into 5 sections A ,B,C,D&E
- II. In section A question number 1 to 3 are Very Short Answer type questions. Attempt any 3 questions.
- III. In section B question number 4 is Source based question.
- IV. In section C question number 5 & 6 are Short Answer based questions.
- V. In section D question number 7 to 9 are Long Answer based questions.
- VI. In section E question number 10 is a Map based question.

#### **SECTION A (VSA)**

#### **Attempt all questions**

2x3=6

- Q.1 Answer:- Iron and steel provides base for all other industries, so it is called a basic industry. It is used to make everything from sewing needle to rail sheets, tubes, wires machines etc.
- Q.2 Answer:-Retail trading services link the producers with consumers. It is the business activity concerned with the sale of goods directly to consumers. Street peddling, handcarts, trucks, online order, etc are examples of non-store retail trading.
- Q.3 Answer:-It is a super-highway project linking Delhi, Kolkata, Chennai and Mumbai. It has six super highways. It forms the shape of a Quadrilateral.

#### **SECTION B (SOURCE BASED QUESTION)**

#### Q.4. 'Manufacturing Industry'

3x1=3

- Q.4.1 Answer:- The name of the coal field is the Ruhr Coal field and it is located in Germany.
- Q.4.2 Answer:- Coal and iron and steel formed the basis of the economy, but as the demand for cold declined, the industry started shrinking. Even after the iron ore was exhausted, the industry remained, using imported ore brought by waterway to the Ruhr.
- Q.4.3 Answer:- Change in the industrial structure have led to the decay of some areas, and there are problems of Industrial waste and pollution.

#### **SECTION C (SHORT ANSWER)**

#### Question no. 5 & 6

2x3=6

Q.5.Answer:- Roads. The road network in India is one of the largest in the world. The road length has increased from 397.62 thousand kilometres in 1950-51 to around 42 lakh kilometres. Of the total kilometreage, the length of the surfaced (metalled) roads increased from 156.11 thousand kilometres in 1950-51 to 833.0 thousands kilometres while the

unsurfaced (unmetalled) road length during the same period increased from 241.5 thousand kilometres to 940 thousand kilometres.

National Highways. A number of important National Higways in India run in north-south and east- west directions. They link one part with the other

- Sher Shah Suri Marg is historically very important. It connects Kolkata with Peshawar. It is now known as National Highway 1, which links Delhi and Amritsar,
- National Highway 2 which links Delhi and Kolkata
- National Highway 3 runs between Agra and Mumbai via Gwalior, Indore and Nasik.
- National Highway 7 is the longest one which links Varanasi with Kanniyakumari via Jabalpur, Nagpur, Hyderabad, Bangalore and Madurai. It traverses a distance of 2,325 km.
- National Highways 5 and 17 run along the eastern and western coasts respectively.
- National Highways 15 represents the border road in Rajasthan desert and run through Kandla, Jaisalmer, Bikaner and joins the border road in Punjab.
- Q.6. Answer:- Mismanagement and environmental problem related to solid waste have now become a major problem, in India, most of the solid wastes are not collected properly. Impacts of improper management of solid wastes are.
  - 1. Solid wastes are a threat to human health and can cause various diseases. It creates the foul smell and it harbours flies and rodents that can cause typhoid, diphtheria, diarrhoea, malaria, cholera and other diseases.
  - 2. Solid waste can create inconvenience rapidly if they are not properly handled, wind and rainwater can splitted it and cause discomfort to people.
  - 3. Industrial solid waste can cause water pollution by dumping it into water bodies. Drains carrying untreated sewage also result in various health problems.

OR

#### Answer:-

- → Air transport terminals are called airports. Air transport cost is comparatively very high, and therefore, it is mainly used for passenger services.
- → Only light and valuable cargo is dispatched by cargo aircraft. In order to help Indian exporters and make their export more competitive, the Government of India introduced the 'open sky policy5 for cargo.
- → Under this policy any foreign airlines or association of exporters can bring freighters to the country for upliftment of cargo.

#### **SECTION D (LONG ANSWER)**

Question no. 7 to 9 3x5=15

Q.7 Ans:The longest trans-continental railway line in North America is Trans-Canadian Railway line. It covers a distance of 7050 km, running from Halifax in the East to Vancouver on the Pacific Coast.

The Trans-Canadian railway line is considered the economic artery of Canada due to the following reasons

- (i) It connects the important industrial cities of Montreal, Ottawa. Winnipeg and Calgary. Goods and people can be easily transported to and from these economic centres with the railways
- (ii) It connects Quebec-Montreal industrial region with the wheat but of Prairie region. Thus, raw materials and finished products are transported with these railways.

- (iii) The line also connects the Coniferous forest region in the North to the Quebec Montreal and the Prairies. All these regions have become complementary to each other and they support economic activities.
- (iv) A loop line from Winnipeg to Thunderbay (Lake Superior) connects this rail line with one of the most important waterways in the world. This is used for exporting various products.
- Q.8. Ans. Namami Gange Programme Ganga, as a river, has national importance but the river requires cleaning by effectively controlling the pollution for its water. The Union Government has launched the 'Namami Gange Programme' with the following objectives:
- developing sewerage treatment systems in towns,
- monitoring of industrial effluents,
- development of river front,
- afforestation along the bank of increase biodiversity,
- cleaning of the river surface,
- development of 'Ganga Grams' in Uttarakhand, UP, Bihar, Jharkhand and West Bengal, and
- creating public awareness to avoid adding pollutants in to the river even in the form of rituals.

OR

#### Answer-

#### **Sustainable Development**

- Development is a multi-dimensional concept and signifies the positive, irreversible transformation of the economy, society and environment.
- In the post World War II era, the concept of development was synonymous to economic growth which was measured in terms of GNP (Gross National Product), Per capita income and consumption.
- But, even the countries having high economic growth, experienced speedy rise in poverty because of its unequal distribution. So, in 1970s, the phrases such as **redistribution with growth** and **growthand equity** were incorporated in the definition of development.
- In 1970s, it was realized that the concept of development can not be restricted to the economic sphere alone So it included the **well-being** and **living standard** of people, availing of the health, education and equality of opportunity and ensuring political and civil rights.
- The notion of **sustainable development** emerged in the wake of general rise in the awareness of **environmental issues** in the late 1960s in Western World people.
- The publication of 'The Population Bomb' by Ehrlich in 1968 and 'The Limits to Growth' by Meadows and others in 1972 further raised the level of fear among environmentalists in particular and people in general.
- This sets the scenario for the emergence of new models of development under a broad phrase 'sustainable development.'
- WCED (World Commission on Environment and Development) headed by Norwegian Prime Minister Gro Harlem Brundtland gave its report (Brundtland report) Our Common Future in 1987.

- The report defines Sustainable Development as a "Development that meets the needs
  of the present without compromising the ability of future generations to meet their
  own needs."
- Sustainable development takes care of ecological, social and economic aspects of
  development during the present times and pleads for conservation of resources to
  enable the future generations to use these resources.

#### O.9. Answer:

Manufacturing. Manufacturing is a secondary process of transforming raw materials into finished products. The raw materials of agriculture, forests, minerals are changed into new products. For example, clay is changed into pottery; timber is changed into furniture. These manufactured goods are more useful and valuable than the raw materials. The location of manufacturing industries depends on a number of physical and socio-economic factors. These factors are called the basis of industries. No single factor decides the location of industries:

1. Nearness to raw materials. Large quantities of raw materials are needed for industries. Therefore, industries are located near the source of raw materials. The industries are located near mines, forests, farms and seas. It saves the cost of transportation. Sugar mills are located in the areas where sugarcane is produced.

Iron and steel industry uses bulky raw materials. Steel centres are developed where coal and iron are easily available. Industries producing perishable goods (meat, fish and dairy products) are located near the areas of production. Example: Jute mills in West Bengal and Cotton Textile mills in Maharashtra are located due to the availability of the raw materials.

2. Power resources. Coal, oil and water power are the main sources of power. Most of the industries are located around coal-fields. The industrial regions of Damodar Valley (India) and Ruhr Valley (Germany) depend upon coal.

Some industries use large amount of electricity. Such industries like chemical industries, aluminium industries and paper industry are located near hydro electric stations, Petrochemical Industries use large quantities of petroleum. Example: Iron and steel centres in India are located near Jharia and Raniganj coal-fields. Chemical fertilizer plant is located at Nangal where cheap water power is available from Bhakra Project.

3. Means of transportation. Modern industries need cheap, developed arid quick means of transportation. Water-transport is the cheapest means of transport. Cheap means of transportation are required for the movement of workers, raw materials and machinery to the factories.

Manufactured goods should be sent to the market at low cost. Example: The great industrial regions of the world (Europe and the U.S.A.) lie at the ends of North Atlantic Ocean Route. Great Lakes provide cheap transport to the industrial region of the U.S.A.

4. Climate: Stimulating climate increases the efficiency of the labourers. Certain industries require special type of climate. Cotton Textile industry requires humid climate. Film industry needs good weather with clear blue sky. Areas with favourable climate become huge markets.

Examples: Mumbai is the leading centre of Cotton Textile due to wet coastal climate. Dry climate has led to the location of Aircraft Industry at Bengaluru (India) and California (U.S.A.).

- 5. Capital. Large amount of capital is invested in many industries. Many industries have been located in big cities like Delhi, Mumbai and Kolkata. Many banks and companies provide capital in these areas.
- 6. Skilled labour. Cheap and skilled labour is essential for the location of the industries. Areas of dense population provide cheap and large labour force. Engineering industries need skilled labour.

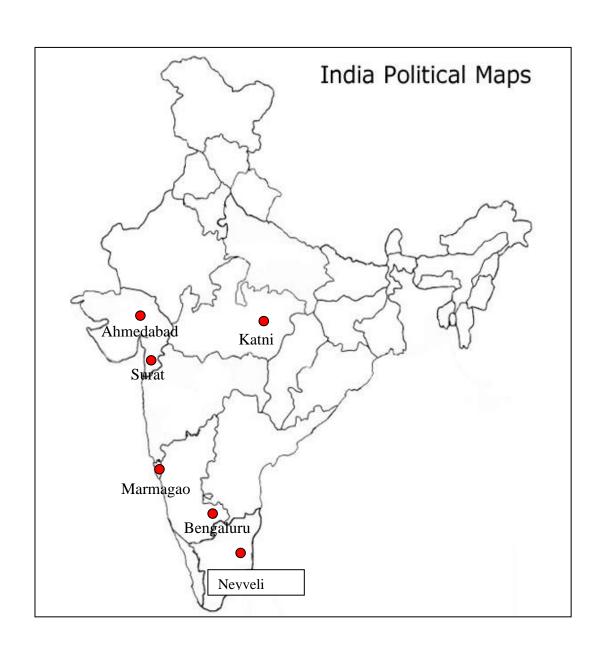
Example: Cotton Textile industry in Lancashire, Glass industries in Ferozabad, Sports goods industry in Jalandhar are located due to availability of the skilled labour. The Swiss are known for watch making, the British for specialized cotton textiles, the Japanese for electronic goods and Varanasi is known for silk embroidery.

#### **SECTION E (MAP)**

Q. 10. On the outline map of India indicate and mark the following features (Attempt any 5).

1x5=5

- a) Bauxite mines of Katni.
- b) International Air port of Ahmedabad.
- c) The largest Lignite coal mines.
- d) Major Sea Port of Marmagao.
- e) Software Technology Park of Bengaluru.
- f) Cotton Textile of Surat.



## Blueprint for Question Paper of Geography for term-II 2021-22 (Class 12<sup>th</sup> ) SET- 2

TIME: 2 HOURS MAX. MARKS: 35

Name of chapter	Very short answer question	Source based question	Short answer-based question	Long answer- based	Map work (5 marks)
	(2 marks)	(3 marks)	(3 marks)	question (5 marks)	
Book- I					
Secondary Activities	1	1			
Tertiary Activities	2			1	
Quaternary activities					
Transport and Communication			1		
Book- II					
Minerals and Energy resources					3
Planning and Sustainable Development				1	
Transport and Communication			1		2
Geographical Perspective on selected issues and problem				1	
	6=3×2	3=3×1	6=3×2	15=5×3	5=5×1

# SAMPLE QUESTION PAPER (2021-22) GEOGRAPHY (029) TERM II SET-2 CLASS 12

Time: 2 Hrs. Max. Marks 35

#### GENERAL INSTRUCTIONS.सामान्य निर्देश।

- I. Question paper is divided into 5 sections A ,B,C,D&E प्रश्न पत्र 5 खंडों ए, बी, सी, डी और ई में बांटा गया है
- II. In section A question number 1 to 3 are Very Short Answer type questions. Attempt any 3 questions. खंड A में प्रश्न संख्या 1 से 3 अति लघु उत्तरीय प्रकार के प्रश्न हैं। कोई 3 प्रश्न हलकरें।
- III. In section B question number 4 is Source based question. खंड B में प्रश्न संख्या 4 स्रोत आधारित प्रश्न है।
- IV. In section C question number 5 & 6 are Short Answer based questions. खंड C में प्रश्न संख्या 5 और 6 लघु उत्तर आधारित प्रश्न हैं।
- V. In section D question number 7 to 9 are Long Answer based questions. खंड D में प्रश्न संख्या 7 से 9 दीर्घ उत्तरीय प्रश्न हैं।
- VI. In section E question number 10 is a Map based question. खंड E में प्रश्न संख्या 10 एक मानचित्र आधारित प्रश्न है।

#### **SECTION A (VSA)**

#### **Attempt all questions**

2x3=6

Q.1. In what way secondary activities add value to natural resources? Give two Examples

द्वितीयक गतिविधियाँ किस प्रकार प्राकृतिक संसाधनों में मूल्यवर्धन करती हैं? दो उदाहरण दीजिये.

- Q.2. Define Quaternary activities. चतुर्थक गतिविधियों को परिभाषित करें।
- Q.3. Differentiate between retail trading and wholesale trading. खुदरा व्यापार और थोक व्यापार में अंतर स्पष्ट कीजिए।

 $\bigcap R$ 

Differentiate between departmental stores and chain stores. डिपार्टमेंटल स्टोर्स और चेन स्टोर्स के बीच अंतर स्पष्ट करें।

#### **SECTION -B (SOURCE BASED QUESTIONS)**

 $3 \times 1 = 3$ 

Q.4. Read the case/source given and answer the following questions. दिए गए मामले/स्रोत को पढ़ें और निम्नलिखित प्रश्नों के उत्तर दें

The iron and steel industry forms the base of all other industries and therefore, it is called a basic industry. It is basic because it provides raw material for other industries such as machine tools used for further production. It may also be called a heavy industry because it uses large quantities of bulky raw materials and its products are also heavy.

Iron is extracted from iron ore by smelting in a blast furnace with carbon (coke) and limestone. The molten iron is cooled and moulded to form pig iron which is used for converting into steel by adding strengthening materials like manganese.

The large integrated steel industry is traditionally located close to the sources of raw materials-iron ore, coal, manganese and limestone-or at places where these could be easily brought, e.g. near ports. But in mini steel mills access to markets is more important than inputs. These are less expensive to build and operate and can be located near markets because of the abundance of scrap metal, which is the main input. Traditionally, most of the steel was produced at large integrated plants, but mini mills are limited tojust one-step process-steel making - and are gaining ground.

लोहा और इस्पात उद्योग अन्य सभी उद्योगों का आधार है और इसलिए, इसे एक बुनियादी उद्योग कहा जाता है। यह बुनियादी है क्योंकि यह अन्य उद्योगों के लिए कच्चा माल प्रदान करता है जैसे कि आगे के उत्पादन के लिए उपयोग किए जाने वाले मशीन टूल्स। इसे भारी उद्योग भी कहा जा सकता है क्योंकि यह भारी मात्रा में कच्चे माल का उपयोग करता है और इसके उत्पाद भी भारी होते हैं।

लौह अयस्क से लोहा कार्बन) कोक (और चूना पत्थर के साथ एक ब्लास्ट फर्नेस में गलाने से निकाला जाता है। पिघले हुए लोहे को ठंडा करके पिग आयरन बनाने के लिए ढाला जाता है जिसका उपयोग मैंगनीज जैसी मजबूत सामग्री को मिलाकर स्टील में परिवर्तित करने के लिए किया जाता है।

विशाल एकीकृत इस्पात उद्योग परंपरागत रूप से कच्चे माल-लौह अयस्क, कोयला, मैंगनीज और चूना पत्थर के स्रोतों के करीब स्थित है -या उन जगहों पर जहां इन्हें आसानी से लाया जा सकता है, उदा। बंदरगाहों के पास। लेकिन लघु स्टील मिलों में इनपुट की तुलना में बाजारों तक पहुंच अधिक महत्वपूर्ण है। ये निर्माण और संचालन के लिए कम खर्चील हैं और स्क्रैप धातु की प्रचुरता के कारण बाजारों के पास स्थित हो सकते हैं, जो कि मुख्य इनपुट है। परंपरागत रूप से, अधिकांश स्टील का उत्पादन बड़े एकीकृत संयंत्रों में किया जाता था, लेकिन मिनी मिलें केवल एक-चरणीय प्रक्रिया-इस्पात बनाने तक सीमित हैं - और आधार हासिल कर रही हैं।

Attempt all questions.सभी प्रश्नों का उत्तर दें।

- 4.1 How iron is manufactured from iron ore? लौह अयस्क से लोहा कैसे बनता है?
- 4.2 Why iron and steel industry is regarded as a key industry and bulky industry? लोहा और इस्पात उद्योग को एक प्रमुख उद्योग और भारी उद्योग के रूप में क्यों माना जाता है?
- 4.3 How significance of mini steel plants is growing in recent time? हाल के समय में लघु इस्पात संयंत्रों का महत्व कैसे बढ़ रहा है?

#### SECTION – C (SHORT ANSWER)

#### Question no. 5 &6

2X3=6

- Q.5. Explain any three points of economic significance of Trans-Siberian railways. ट्रांस-साइबेरियन रेलवे के आर्थिक महत्व के किन्हीं तीन बिंदु पर व्याख्या कीजिए।
- Q.6 Satellites and computers have brought revolutionary changes in the present life of the people. Elaborate the statement with three suitable examples. सैटेलाइट और कंप्यूटर ने लोगों के वर्तमान जीवन में क्रांतिकारी बदलाव लाए हैं। तीन उपयुक्त उदाहरणों के साथ इस कथन की व्याख्या कीजिए।

OR

What are the important characteristics of border roads? सीमावर्ती सड़कों की महत्वपूर्ण विशेषताएं क्या हैं?

#### **SECTION - D (LONG ANSWER)**

#### Question no 7 to 9

3X5 = 15

Que.7. Define the term tourism. Explain any four factors which attract tourists in the world. पर्यटन शब्द की परिभाषा दीजिए। विश्व में पर्यटकों को आकर्षित करने वाले किन्हीं चार कारकों की व्याख्या कीजिए।

Que.8. How is the use of plastic bags harmful for environmental degradation? Evaluate it by citingsuitable reasons.

प्लास्टिक की थैलियों का उपयोग पर्यावरण के क्षरण के लिए किस प्रकार हानिकारक है? उपयुक्त कारणों का उदाहरण देते हुए इसका मूल्यांकन करें।

OR

The disposal of urban waste has become a serious concern for the local authorities. Analyse the statement with suitable examples.

शहरी कचरे का निपटान स्थानीय अधिकारियों के लिए एक गंभीर चिंता का विषय बन गया है। उपयुक्त उदाहरणों के साथ कथन का विश्लेषण कीजिए।

Que.9. "Hill Area Development Programmes in India were drawn keeping in view their topographical, ecological, social and economic conditions Support this statement with suitable explanation.

"भारत में पहाड़ी क्षेत्र विकास कार्यक्रम उनकी स्थलाकृतिक, पारिस्थितिक, सामाजिक और आर्थिक परिस्थितियों को ध्यान में रखते हुए तैयार किए गए थे। उपयुक्त स्पष्टीकरण के साथ इस कथन का समर्थन करें।

#### **SECTION E (MAP)**

Q. 10. On the outline map of India indicate and mark the following features (**Attempt any 5**). 1x5=5 भारत के रेखा मानचित्र पर निम्नलिखित विशेषताओं को इंगित करें और चिह्नित करें) कोई भी(5)

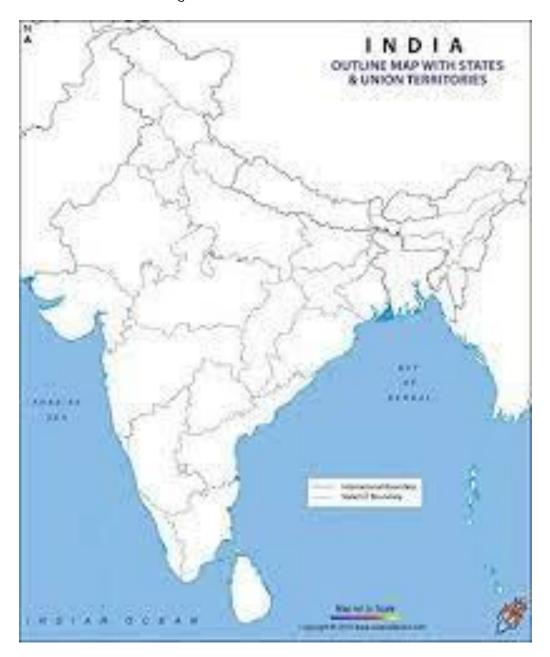
- a) Iron ore mines of Orrisa उडीसा की लौह अयस्क खान
- b) Oil Refinery located in Bihar बिहार में स्थित तेल रिफाइनरी।
- c) The largest Manganese mine in MP मध्य प्रदेश का सबसे बडी मैंगनीज खान।
- d) Easternmost terminal of East-West Corridor ईस्ट-वेस्ट कॉरिडोर का सबसे पूर्वी टर्मिनल
- e) Southernmost Metropolitan city connected by Golden Quadrilateral. सबसे दक्षिणी महानगर स्वर्णिम चतुर्भुज से जुड़ा हुआ है।
- f) Oldest Copper mines of Rajasthan राजस्थान की सबसे पुरानी तांबे की खदानें

For visually impaired students in lieu of Question no. 10(Attempt any 5). 1x5=5 दृष्टिबाधित छात्रों के लिए प्रश्न संख्या10 के स्थान पर। (कोई भी 5 प्रयास करें )। 1x5=5

a) Name an important Iron Ore mine of Orrisa

उडीसा की एक महत्वपूर्ण लौह अयस्क खदान का नाम बताइए।

- b) An important Oil Refinery located in Bihar बिहार में स्थित एक महत्वपूर्ण तेल रिफाइनरी
- c) Where is the largest Manganese mine, located in Madhya Pradesh and what is the name of that mine?
  - मध्य प्रदेश में सबसे बड़ी मैंगनीज खदान कहाँ स्थित है और उस खदान का नाम क्या है?
- d) Write down the name of Easternmost terminal of East-West Corridor ईस्ट-वेस्ट कॉरिडोर के सबसे पूर्वी टर्मिनल का नाम लिखिए
- e) Which is the Southernmost Metropolitan city connected by the Golden Quadrilateral? स्वर्णिम चतुर्भुज से जुड़ा सबसे दक्षिणी महानगर कौन सा है?
- f) What is the name of the Oldest Copper mines of Rajasthan? राजस्थान की सबसे पुरानी तांबे की खान का क्या नाम है?



### MARKING SCHEME GEOGRAPHY (029)

### Term –II SET-2 CLASS – 12

#### GENERAL INSTRUCTIONS.

- i. Question paper is divided into 5 sections A ,B,C,D&E
- ii. In section A question number 1 to 3 are Very Short Answer type questions. Attempt any 3 questions.
- iii. In section B question number 4 is Source based question.
- iv. In section C question number 5 & 6 are Short Answer based questions.
- v. In section D question number 7 to 9 are Long Answer based questions.
- vi. In section E question number 10 is a Map based question.

#### SECTION A (VSA)2 marks

#### **Attempt all questions**

2x3=6

- **Ans** 1. Secondary activities add value to the natural resources by transforming raw materials into valuable products. For example, any two.
- (i) Cotton in the boll has limited use, but after transforming into yarn, it becomes more valuable and can be used for making clothes. (ii) Iron-ore cannot be used directly from the mines butafter being converted into steel, it can be used formaking many valuable machines, tools, etc.
- (iii) Materials from the farms, forest products and resources of the sea can be put into greater use by secondary activities.
- **Ans 2**. Quaternary Activities: People Engaged in Quaternary Activities These activities centre around research, development and may be seen as an advanced form of services involving specialised knowledge and technical skills. Quaternary activities involve collection, production and distribution of information.

The service sector which is knowledge oriented comes under quaternary activities. For example, a medical transcriptionist and a CEO of an MNC (Multi-National Company) work under this sector. They are highly specialised professionals with deep knowledge in their particular field.

**Ans .3**. The business activities concerned with the sale of goods directly to the consumers known as retail trading, while wholesale trading constitutes bulk business through numerous intermediary merchants.

 $\bigcap R$ 

Departmental stores delegate the responsibility and authority to departmental heads for purchasing of commodities, while chain stores are able to purchase merchandise most economically, often going so far as todirect the goods to be manufactured to their specifications.

- **Ans.4.1** Iron is extracted from iron ore by smelting in a blast furnace with carbon (coke) and limestone. The molten iron is cooled and moulded to form pig iron which is used for converting into steel by adding strengthening materials like manganese.
- **4.2 Ans.** The iron and steel industry forms the base of all other industries and therefore, it is regarded as a key industry. It is basic because it provides raw material for other industries such as machine tools used for further production.

Iron ore industry may also be called a bulky or heavy industry because it uses large quantities of bulky raw materials and its products are also heavy like machine tools, parts of automobiles, railways and so on.

- **4.3 Ans.** The significance of mini steel plants is gaining in recenttime in the following ways As compared to large integrated steel industry, mini steel mills need only nearness to market places rather than other location factors; thus, these can be set up anywhere. Mini steel mills are less expensive to build and operate. They need only scrap metal which is the main input.
- **Ans 5**. The Trans-Siberian railways is a major rail route of Russia. It runs from St. Petersburg in the West to Vladivostok in the East on the Pacific coast. The economic significance of these railways is
- (i) It has made it possible to link Asian markets with the European markets. Now goods can be easily transported between the two continents, which provides a boost to the economies of both continents.
- (ii) It connects various commercial centres in Europe and Asia and provides push to trade and commerce. For example, it runs through Ural Mountains and connects Chita (Agro centre) to Irkutsk (fur centre). (iii) This railway network has improved connectivity towards its South by the connecting links such as towards Odessa (Ukraine), Ulan Bator (Mongolia), Beijing (China) etc. Thus, the economies of these regions have also integrated by the network.
- **Ans.6**. Satellites touch human lives in many ways. Every time we use a cell phone to call a friend, send an SMS or watch a popular programme on cable television, we are using satellite communication. These have rendered the unit cost and time of communication invariant in terms of distance. Today weather forecasting through television is a boon in saving the loss of life and property.

As billions use the Internet each year, cyberspace will expand the contemporary economic and social space of humans through email, e-commerce, e-learning and e-governance.

The Internet together with fax, television and radio will be accessible to more and more people cutting across place and time. It is these modern communication systems, more than transportation that has made the concept of global village a reality

OR

The important characteristics of border roads are . These roads are constructed on the international borders by some specialised agency in a country.

These roads are important for strategic as well as defence purposes as they help in providing access to strategically important areas along the borders. These roads are important for the economy of the people living along the border areas as these are used to supply goods and connect the border areas with majorcities.

**Ans.7**. Ans. Tourism is defined as travel which is done for the purpose of recreation rather than tourism. It provides opportunities for growth of infrastructure industries, retail trading

and craft industries.

Four factors that attract tourists in the world are (i) Climate The climatic conditions of many regionsdecides the demand for tourism. People from colder regions visit those places where climate is warm and sunny. People going for winter holidays have specific requirements such as higher temperatures than their homeland or high snow cover for winter sports like skiing. Tourism flourished in mediterranean region due to climatic factors.

- (ii) Landscape and Scenic Beauty: People visit those areas that are famous for their scenic beauty and picturesque landscape. These areas includes mountain regions, lakes, sea coasts, grasslands, hills etc. Tourism in Himalayan states has flourished due to its landscape.
- (iii) History and Art People visit those areas which are famous for their art and history. These areas have higher historical significance and are known for their art forms. These include ancient towns, castles, palaces, churches, battlefields, excavation sites etc.
- (iv) Culture and Economy People who take interestin art and culture are attracted most towards suchplaces having diverse traditions and customs. Cheaper places which are pocket friendly also attract tourists from all over the world.
- Ans.8. Plastic is a non-biodegradable substance and its use and production should be minimum. Plasticdebris is found absolutely everywhere, from the Arctic to Antarctica. It clogs street drains in our cities; itlitters campgrounds and national parks, and is even piling up on Mount Everest. But thanks to runoff, andto our fondness for directly dumping our trash into the nearest river or lake, plastic is growingincreasingly common in the world's oceans. When plastics are broken down, this simply means one largepiece of plastic is reduced into a bunch of smaller pieces of plastic. These smaller pieces of plastic can be consumed by smaller animals, but are still indigestible. It affects all organisms in the food chain from tinyspecies like plankton through to whales. Toxins work their way up the food chain when plastic is ingestedand can even be present in the fish people eat. From cell phones to bicycle helmets to IV bags, plastic hasmoulded society in ways that make life easier and safer. But the synthetic material also has left harmfulimprints on the environment.
- Chemicals added to plastics are absorbed by human bodies. Some of these compounds have been found

to alter hormones or have other potential human health effects.

- Plastic debris, laced with chemicals and often ingested by marine animals, can injure or poison wildlife.
- Floating plastic waste, which can survive for thousands of years in water, serves as mini transportation devices for invasive species, disrupting habitats.
- Plastic buried deep in landfills can leach harmful chemicals that spread into groundwater.
- Around 4 percent of world oil production is used as a feedstock to make plastics, and a similar amount isconsumed as energy in the process.

OR

The problem of overcrowded, congested and insufficient infrastructure of urban areas results inaccumulation of huge urban waste. There are two sources of urban waste. Household or domesticsources and industrial or commercial sources. The mismanagement of urban waste disposal is a seriousproblem in big cities. Tons of waste come out daily in metropolitan cities and are burnt. The smoke released from the wastepollutes the air. Lack of sewers or other means to dispose of human excretes safely and the inadequacyof garbage collection sources adds to water pollution. The concentration of industrial units in and around urban centres

gives rise to a series of environmentalproblems. Dumping of industrial waste into rivers is the major cause of water pollution. The solid waste generation continues to increase in both absolute and per capita in cities. This improper disposal of solid waste attracts rodents and flies which spread diseases. The thermal plants release a lot of smoke and ash in the air. For example, a plant producing 500mw electricity releases 2000tons of ash which is difficult to manage.

Ans.9. Yes, it is true that Hill Area Development Programmes in India were drawn keeping in view their topographical, ecological, social and economic conditions because the main objectives of these programmes were to develop horticulture. plantation agriculture, animal husbandry, poultry, forestry, small scale and village industry. By this efficient use of local resources may become possible National Committee on the Development of Backward Area (1981) set a criterion that the hill areas having a height above 600 m and not covered under tribal sub-plan be treated as backward hill areas. The programme covered all the hilly districts of Uttar Pradesh (present Uttarakhand), Mikir hill and North hills of Assam, Darjiling district of West Bengal and Nilgiri district of Tamil Nadu. In drawing up the plans for the region, ecological elements were kept in mind. The aim of plan was to harness local resources without environmental degradation. In the regard deforestation was prohibited and pollution of different type was discharged Along with economic topographical and ecological sphere, social sphere was also given due attention in implementation of the plan. The objective of plan was to promote marginalised and socially backward classes.

#### Ans 10. SECTION E (MAP)

On the outline map of India indicate and mark the following features (Attempt any 5).

1x5=5

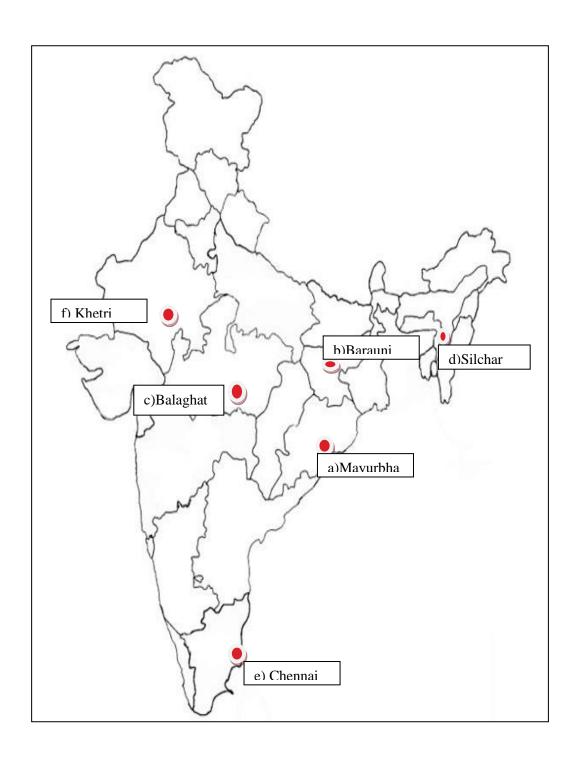
- a) Iron ore mines located in Orrisa (Mayurbhanj )
- b) Oil Refinery located in Bihar (Baruni)
- c) The largest Manganese mines in MP ( Balaghat )
- d) Easternmost terminal of East-West Corridor.(Silchar)
- e) Southern Metropolitan city connected by Golden Quadrilateral. (Chennai)
- f) Oldest Copper mines of Rajasthan (Khetri)

#### For visually impaired students in lieu of Question no. 10(Attempt any 5). 1x5=5

- a) Name an important Iron Ore mine of Orrisa (Mayurbhanj )
- b) An important Oil Refinery located in Bihar (Baruni)
- c) Where is the largest Manganese mine, located in Madhya Pradesh) and what is the name of that mine? (Balaghat)

Neyveli)

- d) Write down the name of the Easternmost terminal of the East-West Corridor. (Silchar)
- e) Which is the Southernmost Metropolitan city connected by the Golden Quadrilateral? (Chennai)
- f) What is the name of the Oldest Copper mines of Rajasthan? (Khetri)



## BLUEPRINT OF GEOGRAPHY XII FOR TERM-2 2021-22 SET -3

Book Name	Chapter No.	Chapter Name	Mark Assigned
	1	Secondary Activities	
Fundamentals of Human Geography	2	Tertiary and Quaternary Activities	
	3	Transport and Communications	9+6= 15
India People and Economy	2	Minerals and Energy Resources  Planning and Sustainable Development in Indian Context	7
	3	Transport and Communication	4
	4	Geographical Perspective on selected issues and problems	4
India Map	1	Minerals and energy Resources	3+2=5
	2	Transport and Communication	
	35		

# PRACTICE QUESTION PAPER (2021-22) GEOGRAPHY (029) TERM II SET-3 CLASS 12

Time: 2 Hrs. Max. Marks 35

#### GENERAL INSTRUCTIONS - ( सामान्य निर्देश)

- I. Question paper is divided into 5 sections A ,B,C,D&E
- 🛾 . प्रश्न पत्र ५ खंडों ए, बी, सी, डी और ई में बांटा गया है
- II. In section A question number 1 to 3 are Very Short Answer type questions. Attempt any 3 questions.
- ा. खंड ए में प्रश्न संख्या 1 से 3 अति लघु उत्तरीय प्रकार के प्रश्न हैं। कोई 3 प्रश्न हल करें।
- III. In section B question number 4 is Source based question.
- 💶 . खंड बी में प्रश्न संख्या 4 स्रोत आधारित प्रश्न है।
- IV. In section C question number 5 & 6 are Short Answer based questions.
- IV. खंड सी में प्रश्न संख्या 5 और 6 लघु उत्तर आधारित प्रश्न हैं।
- V. In section D question number 7 to 9 are Long Answer based questions.
- v. खंड D में प्रश्न संख्या 7 से 9 दीर्घ उत्तरीय प्रश्न हैं।
- VI. In section E question number 10 is a Map based question.
- √।. खंड ई में प्रश्न संख्या 10 एक मानचित्र आधारित प्रश्न है।

#### **SECTION A (VSA)**

#### Attempt all questions -

2x3=6

सभी प्रश्नों को हल करें -

- Q.1. Explain any two important features of cottage industries.
- प्रश्न .1 कुटीर उद्योगों की किन्हीं दो प्रमुख विशेषताओं की व्याख्या कीजिए।
- Q.2. Define Secondary Activities.
- प्रश्न .2 द्वितीयक क्रियाओं को परिभाषित करें।
- Q.3. Differentiate between Rural marketing and Urban marketing.
- प्रश्न .3 ग्रामीण विपणन और शहरी विपणन में अंतर स्पष्ट कीजिए।

 $\cap \mathbb{R}$ 

Differentiate between departmental stores and chain stores. डिपार्टमेंटलस्टोर्स और चेन स्टोर्स के बीच अंतर करें।

#### **SECTION B (SOURCE BASED QUESTION)**

#### Q.4. 'Manufacturing Industry'

3x1=3

प्रश्न .4 'विनिर्माण उद्योग'

Manufacturing literally means 'to make by hand'. However, now it includes goods 'made by machines'. It is essentially a process which involves transforming raw

materials into finished goods of higher value for sale in local or distant markets. Conceptually, an industry is a geographically located manufacturing unit maintaining books of accounts and records under a management system. As the term industry is comprehensive, it is also used as synonymous with 'manufacturing'. When one uses terms like 'steel industry' and 'chemical industry', one thinks of factories and processes. But there are many secondary activities which are not carried on in factories such as what is now called the 'entertainment industry' and 'Tourism industry', etc. So, for clarity, the longer expression 'manufacturing industry' is used. निर्माण का शाब्दिक अर्थ है 'हाथ से बनाना'। हालांकि, अब इसमें 'मशीनों से बने' सामान शामिल हैं। यहअनिवार्य रूप से एक प्रक्रिया है जिसमें कच्चे माल को उच्च मुल्य के तैयार माल में बदलना शामिल हैस्थानीय या दूर के बाजारों में बिक्री। संकल्पनात्मक रूप से. एक उद्योग भौगोलिक रूप से स्थित विनिर्माण इकाई हैएक प्रबंधन प्रणाली के तहत खातों और अभिलेखों की पुस्तकों को बनाए रखना। जैसा कि उद्योग शब्द व्यापकहै, इसे 'विनिर्माण' के पर्याय के रूप में भी प्रयोग किया जाता है। जब कोई 'इस्पात' जैसे शब्दों का प्रयोग करता है उद्योग' और 'रासायनिक उद्योग', कारखानों और प्रक्रियाओं के बारे में सोचते हैं। लेकिन कई द्वितीयक गतिविधियाँऐसी हैंजो कारखानों में नहीं की जाती हैं जैसे कि 'मनोरंजन उद्योग' और 'पर्यटन उद्योग'. आदि। स्पष्टता के लिए. लंबी अभिव्यक्ति 'विनिर्माण उद्योग' का उपयोग किया जाता है।

#### **Attempt all questions**

सभी प्रश्नों को हल करें।

- 4.1. What do you understand by the term Management System of Industry?
- .4.1उद्योग की प्रबंधन प्रणाली शब्द से आप क्या समझते हैं?
- 4.2. "Manufacturing produced more usefulthings by the process." Give one suitable example.
- " .4.2विनिर्माण प्रक्रिया द्वारा अधिक उपयोगी चीजों का उत्पादन किया। "एक उपयुक्त उदाहरण दीजिए।
- 4.3. How the 'Entertainment industry' and 'Tourism industry' are different from steel industry?
- .4.3'मनोरंजन उद्योग' और 'पर्यटन उद्योग' किस प्रकार इस्पात उद्योग से भिन्न हैं?

#### SECTION C (SHORT ANSWER)

#### Question no. 5 & 6

2x3=6

प्रश्न संख्या ५ और६

Q.5. Railways plays a vital rolemore than roadways to promotetrade and tourism in the world. Support this

प्रश्न .5 दुनिया में व्यापार और पर्यटन को बढ़ावा देने के लिए रेलवे सड़क मार्ग से ज्यादा महत्वपूर्ण भूमिका निभाता है। उपयुक्त तीन तर्कों के साथ इसकथन का समर्थन करें। statement with three suitable arguments.

Q.6. "Mass communication system likeRadio and Television plays an important role in the life of people." Elaborate the statement with three suitable examples. प्रश्न" .6 रेडियो और टेलीविजन जैसी जन संचार प्रणाली लोगों के जीवन में एक महत्वपूर्ण भूमिका निभाती है। " तीन उपयक्त उदाहरणों के साथ इस कथन की व्याख्या कीजिए।

OR

Evaluate the role and importance of waterways in the economic development of India?

भारत के आर्थिक विकास में जलमार्ग की भूमिका और महत्व का मूल्यांकन करें?

#### SECTION D (LONG ANSWER)

#### Question no. 7 to 9

3x5=15

प्रश्न संख्या ७ से०

Q.7. 'The growth in tourism industry is more because of various developments." What are the main attractions of tourist in the world? Explain any five.

प्रश्न .7 'पर्यटन उद्योग में वृद्धि विभिन्न क्षेत्रों में विकास के कारण अधिक है। दुनिया में पर्यटन के मुख्य आकर्षण क्या हैं? कोई पाँच स्पष्ट कीजिए।

Q.8. How the Air and Noise pollutions are harmful for environmental degradation? Evaluate it by giving suitable reasons and suggestions reduction of it. प्रश्न .8 वायु और ध्विन प्रदूषण पर्यावरण के क्षरण के लिए किस प्रकार हानिकारक हैं?उपयुक्त कारणों और इसे कम करने के सुझावदेकर इसकामूल्यांकन करें।

OR

The slums became the serious problem for the local authorities. Analyse the statement with suitableexamples in connection with The Swachh Bharat Mission. झुग्गियां स्थानीय प्रशासन के लिए गंभीर समस्या बन गईं। स्वच्छ भारत मिशन के संबंध में उपयुक्त उदाहरणों के साथ कथन का विश्लेषण करें।

Q.9. 'The command area of Indira Gandhi Rajasthan Canal has been become the life line for the western part of Rajasthan." Highlights any two benefits and two negative impact of command aera and one measure to promote sustainable development in this area.

प्रश्न .9 'इंदिरा गांधी राजस्थान नहर का कमान क्षेत्र किसके पश्चिमी भाग के लिए जीवन रेखा बन गया है'राजस्थान कमांडक्षेत्र के किन्हीं दो लाभों और दो नकारात्मक प्रभावों पर प्रकाश डालिए और इस क्षेत्र में सतत विकास को बढ़ावा देने के लिए एक उपाय सुझाइए ।

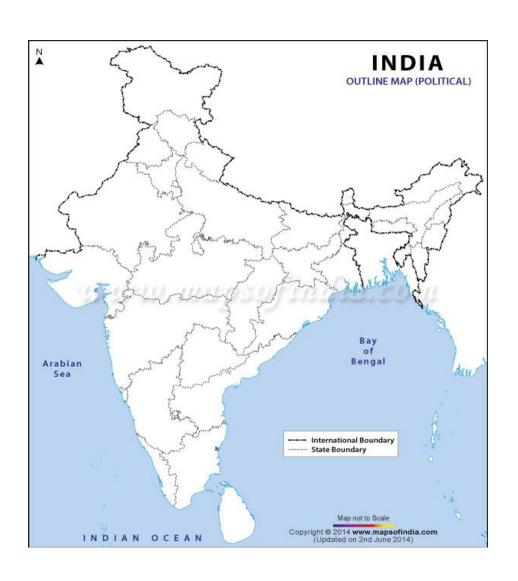
#### **SECTION E (MAP)**

Q. 10. On the outline map of India indicate and mark the following features (Attempt any 5).

1x5=5

प्रश्न .10 भारत के रूपरेखा मानचित्र पर निम्नलिखित विशेषताओं को इंगित करें और चिह्नित करें (किसी भी 5 का प्रयास करें)।

- a) Iron ore mines of Odisha
- a) ओडिशा की लौह अयस्क खदानें
- b) Oil Refinery located in Utter Pradesh.
- b) उत्तर प्रदेश में स्थित तेल रिफाइनरी।
- c) The largest Lignite coal mines.
- c) सबसे बड़ी लिग्नाइट कोयला खदानें।
- d) Westernmost terminal of East-West Corridor
- d) पूर्व-पश्चिम कॉरिडोर का सबसे पश्चिमी टर्मिनल
- e) Northernmost Metropolitan city connected by Golden Quadrilateral.
- e) सबसे उत्तरी महानगर जो स्वर्णिम चतुर्भुज से जुड़ा हुआ है।
- f) Copper mines of Jharkhand
- f) झारखंड की तांबे की खदानें



# MARKING SCHEME (2021-22) GEOGRAPHY (029) TERM II SET-3 CLASS 12

Time: 2 Hrs. Max. Marks 35

#### **GENERAL INSTRUCTIONS**

I. Question paper is divided into 5 sections A ,B,C,D & E

II. In section A question number 1 to 3 are Very Short Answer type questions. Attempt any 3 questions.

III.In section B question number 4 is Source based question.

IV.In section C question number 5 & 6 are Short Answer based questions.

V. In section D question number 7 to 9 are Long Answer based questions.

VI.In section E question number 10 is a Map based question.

#### **SECTION A (VSA)**

#### Attempt all questions -

2x3=6

Q.1. Explain any two important features of cottage industries.

Ans- 1- Small scale production

- 2- Production is for subsistence purpose
- 3- Family members involve in production activity
- Q.2. Define Secondary Activities.

Ans- Secondary activities add value to natural resources by transforming raw materials into valuable products.

Cotton in the boll has limited use but after it is transformed into yarn,

#### Q.3. Differentiate between Rural marketing and Urban marketing.

Ans-**Rural marketing** centres cater to nearby settlements. These are quasi-urban centres.personal and professional services are not well-developed. These form local collecting and distributing centres. Most of these have mandis (wholesale markets) and also retailing areas.Periodic markets in rural areas are found where there are no regular markets and local periodic markets are organised at different temporal intervals.

**Urban marketing** centres have more widely specialised urban services. They provide ordinary goods and services as well as many of the specialised goods and services required by people. Urban centres, therefore, offer manufactured goods as well as many specialised markets develop, e.g. markets for labour, housing, semi or finished products. Services of educational institutions and professionals such as teachers, lawyers, consultants, physicians, dentists and veterinary doctors are available.

#### $\cap \mathbb{R}$

Differentiate between departmental stores and chain stores.

Ans-**Departmental stores** delegate the responsibility and authority to departmental heads for purchasing of commodities and for overseeing the sale in different sections of the stores.

Chain stores are able to purchase merchandise most economically, often going so far

as to direct the goods to be manufactured to their specification. They employ highly skilled specialists in many executive tasks. They have the ability to experiment in one store and apply the results to many.

#### **SECTION B (SOURCE BASED QUESTION)**

#### Q.4. 'Manufacturing Industry'

3x1=3

Manufacturing literally means 'to make by hand'. However, now it includes goods 'made by machines'. It is essentially a process which involves transforming raw materials into finished goods of higher value forsale in local or distant markets. Conceptually, an industry is a geographically located manufacturing unit maintaining books of accounts and records under a management system. As the term industry is comprehensive, it is also used as synonymous with 'manufacturing'. When one uses terms like 'steel industry' and 'chemical industry', one thinks of factories and processes. But there are many secondary activities which are not carried on in factories such as what is now called 'entertainment industry' and 'Tourism industry', etc. So for clarity, the longer expression 'manufacturing industry' is used.

Attempt all questions

4.1. What do you understand by the term Management System of Industry?

Ans- An industry is a geographically located manufacturing unit maintaining books of accounts and records under

a management system.

4.2. "Manufacturing produced more usefulthings by the process." Give one suitable example.

Ans- Secondary activities add value to natural resources by transforming raw materials into valuable products.

Cotton in the boll has limited use but after it is transformed into yarn,

4.3. How the 'Entertainment industry' and 'Tourism industry' are different from steel industry?

Ans- When one uses terms like 'steel industry' and 'chemical industry', one thinks of factories and processes. But there are many secondary activities which are not carried on in factories such as what is now called the

'entertainment industry' and 'Tourism industry', etc. So, for clarity.

#### SECTION C (SHORT ANSWER)

Question no. 5 & 6 2x3=6

Q.5. Railways plays a vital rolemore than roadways to promotetrade and tourism in the world. Support this statement with three suitable arguments.

Ans-Railways are a mode of land transport for bulky goods and passengers over long distances. Commuter trains are very popular in U.K., U.S.A, Japan and India. These carry millions of passengers daily to and fro in the city. The industrial regions exhibit some of the highest densities in the world. The important rail heads are London, Paris, Brussels, Milan, Berlin and Warsaw. Passenger transport is more important than freight in many of these countries. Underground railways are important in London and Paris. Channel Tunnel, operated by Euro Tunnel Group through England, connects London with Paris. Trans-continental railway lines have now lost Trans—continental railways run across the continent and link its two ends. They were constructed for economic and political reasons to facilitate long runs in different directions.

Q.6. "Mass communication system likeRadio and Television plays an important role in the life of people." Elaborate the statement with three suitable examples. Ans-Radio broadcasting started in India in 1923 by the Radio Club of Bombay. Since then, it gained immense popularity and changed the sociocultural life of people. Within no time, it made a place in every household of the country. Government took this opportunity and brought this popular mode of communication under its control in 1930 under the Indian Broadcasting System. It was changed to All India Radio in 1936 and to Akashwani in 1957. All India Radio broadcasts a variety of programmes related to information, education and entertainment. Special news bulletins are also broadcast at specific occasions like session of parliament and state legislatures. **Television** broadcasting has emerged as the most effective audio-visual medium for disseminating information and educating masses. Initially, the T.V. services were limited only to the National Capital where it began in 1959. After 1972, several other centres became operational. In 1976, TV was delinked from All India Radio (AIR) and got a separate identity as Doordarshan (DD). After INSAT-IA (National Television-DD1) became operational, Common National Programmes (CNP) were started for the entire network and its services were extended to the backward and remote rural areas.

#### OR

Evaluate the role and importance of waterways in the economic development of India?

Ans- The Inland Waterways Authority has also identified 10 other inland waterways, which could be upgraded. The backwaters (Kadal) of Kerala has special significance in Inland Waterway. Apart from providing cheap means of transport, they are also attracting a large number of tourists in Kerala. The famous Nehru Trophy Boat Race (VALLAMKALI) is also held in the backwaters.

For the development, maintenance and regulation of national waterways in the country, the Inland Waterways Authority was set up in 1986. The following waterways have been declared as the National Waterways by the Government Waterways is an important mode of transport for both passenger and cargo traffic in India. It is the cheapest means of transport and is most suitable for carrying heavy and bulky material. It is a fuel-efficient and eco-friendly mode of transport. The water transport is of two types—(a) inland waterways, and (b) oceanic waterway India has a vast coastline of approximate 7,517 km, including islands. Twelve major and 185 minor ports provide infrastructural support to these routes. Oceanic routes play an important role in the transport sector of India's economy. Approximately 95 per cent of India's foreign trade by volume and 70 per cent by value moves through ocean routes. Apart from international trade, these are also used for the purpose of transportation between the islands and the rest of the country.

#### **SECTION D (LONG ANSWER)**

Ouestion no. 7 to 9 3x5=15

Q.7. 'The growth in tourism industry is more because of various developments." What are the main attractions of tourist in the world? Explain any five.

Ans- The growth in tourism industry- Demand: and Transport The main attractions of tourist in the world

- 1.Climate:
- 2. Landscape:
- 3. History and Art
- 4. Culture and Economy:

Q.8. How the Air and Noise pollutions are harmful for environmental degradation? Evaluate it by giving suitable reasons and suggestions reduction of it. Ans-Air pollution is taken as addition of contaminants, like dust, fumes, gas, fog, odour, smoke or vapour to the air in substantial proportion and duration that may be harmful to flora and fauna and to property. With increasing use of varieties of fuels as the source of energy, there is a marked increase in emission of toxic gases into the atmosphere resulting in the pollution of air. Combustion of fossil fuels, mining and industries are the main sources of air pollution.

Smoky fog over cities called as urban smog is caused by atmospheric pollution. It proves very harmful to human health. Air pollution can also cause acid rains. Rainwater analysis of urban environment has indicated that pH value of the first rain after summer is always lower than the subsequent rains.

Noise pollution refers to the state of unbearable and uncomfortable to human beings which is caused by noise from different sources. This matter has become a serious concern only in recent years due to a variety of technological innovations. The main sources of noise pollution are various factories, mechanised construction an demolition works, automobiles and aircraft, etc. There may be added periodical but polluting noise from sirens, loudspeakers used in various festivals, programmes associated with community activities. The level of steady noise is measured by sound level expressed in terms of decibels (dB). Of all these sources, the biggest nuisance is the noise produced by traffic, because its intensity and nature depend upon factors, such as the type of aircraft, vehicle, train and the condition of road, as well as, that of vehicle (in case of automobiles). In sea traffic, the noise pollution is confined to the harbour due to loading and unloading activities being carried. Industries cause noise pollution but with varying intensity depending upon the type of industry. Noise pollution is location specific and its intensity declines with increase in distance from the source of pollution, i.e. industrial areas, arteries of transportation, airport, etc. Noise pollution is hazardous in many metropolitan and big cities in India

#### OR

The slums became the serious problem for the local authorities. Analyse the statementwith suitable examples in connection with The Swachh Bharat Mission. Ans-These are inhabited by those people who were forced to migrate from the rural areas to these urban centres in search of livelihood but could not afford proper housing due to high rent and high costs of land. They occupy environmentally incompatible and degraded areas. Slums are residential areas of the least choice, dilapidated houses, poor hygienic conditions, poor ventilation, lack of basic amenities, like drinking water, light and toilet facilities, etc. Open defecation, unregulated drainage system and overcrowded narrow street patterns are serious health and socioenvironmental hazards.

Moreover, most of the slum population works in low-paid, high risk-prone,

unorganised sectors of the urban economy. Consequently, they are the undernourished, prone to different types of diseases and illness and can not afford to give proper education to their children. The poverty makes them vulnerable to drug abuse, alcoholism, crime, vandalism, escapism, apathy and ultimately social exclusion.

The Swachh Bharat Mission (SBM) is part of the urban renewal mission launched by the Government of India to improve the quality of life in urban slums.

Q.9. 'The command area of Indira Gandhi Rajasthan Canal has been become the life line for the western part of Rajasthan." Highlights any two benefits and two negative impact of command aera and one measure to promote sustainable development in this area.

Ans- Introduction of canal irrigation has brought about a perceptible transformation in the agricultural economy of the region. Soil moisture has been a limiting factor in successful growing of crops in this area. Spread of canal irrigation has led to increase in cultivated area and intensity of cropping. The traditional crops sown in the area, gram, bajra and jowar have been replaced by wheat, cotton, groundnut and rice. This is the result of intensive irrigation. This intensive irrigation, no doubt, initially has led to tremendous increase in agricultural and livestock productivity. This has also caused waterlogging. and soil salinity, and thus, in the long run, it hampers the sustainability of agriculture.

#### **SECTION E (MAP)**

- Q. 10. On the outline map of India indicate and mark the following features (**Attempt any 5**). 1x5=5
- a) Iron ore mines of Odisha- Mayurbhani
- b) Oil Refinery located in Uttar Pradesh- Mathura
- c) The largest Lignite coal mines- Neyveli
- d) Westernmost terminal of East-West Corridor- Porbander
- e) Northernmost Metropolitan city connected by Golden Quadrilateral- Delhi
- f) Copper mines of Jharkhand- Hazaribagh

