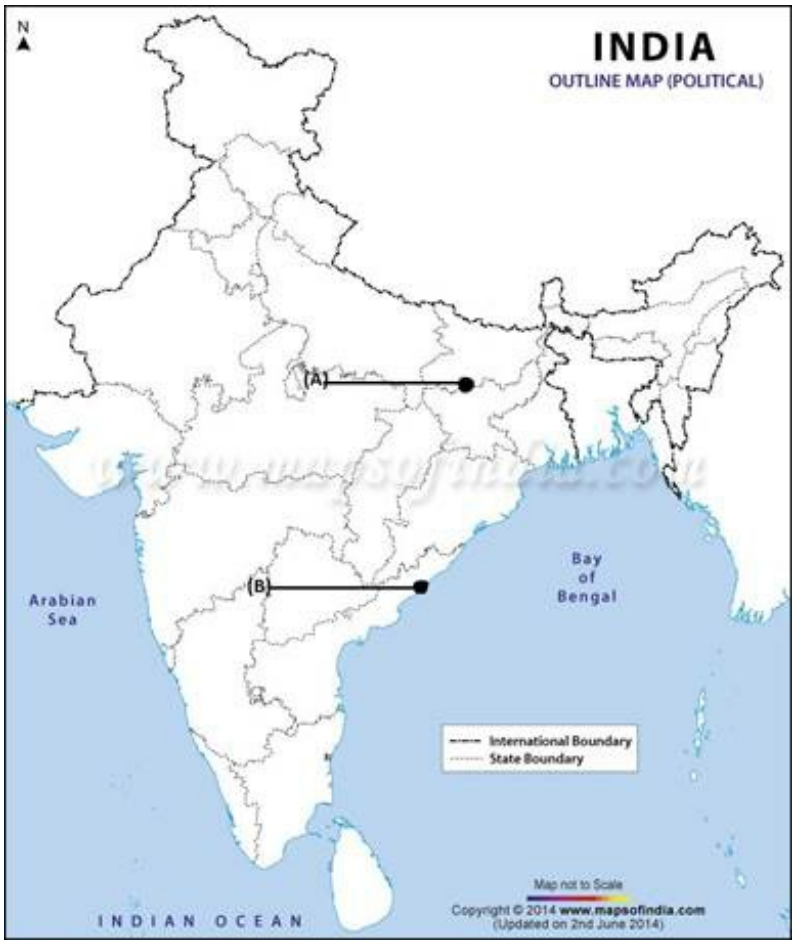
CBSE Test Paper - 03

Chapter - 13 Minerals and Energy resources

1. Which is the most important field of Gujarat? **(1)**
   a. Gandhinagar
   b. Ankeleshwar
   c. Digboi
   d. Mumbai
2. _____ is the basic mineral and the backbone of industrial development. **(1)**
   a. cement
   b. iron ore
   c. coal
   d. granite
3. Energy can be generated from _____ minerals like coal, petroleum, natural gas, uranium and from electricity. **(1)**
   a. stone
   b. metallic
   c. rock
   d. fuel
4. There are several hundred _____ in India, which could be used to generate electricity. **(1)**
   a. hot springs
   b. oceans
   c. iron mines
   d. coal mines
5. Which one of the following minerals is contained in the Monazite sand?
   a. thorium
   b. oil
   c. uranium
   d. coal
6. To which countries iron ore is exported from Vishakhapatnam port? **(1)**
7. Where is the largest solar power plant in India located? **(1)**

8. Why is copper mainly used in electrical cables and electronic industries? **(1)**
9. How is iron-ore transported from Kudremukh mines to a port near Mangaluru? **(1)**
10. What is the contribution of coal in the installed capacity of electricity? Why is the share of coal continuing to be highest? **(3)**
11. How would you classify the types of coal on the basis of geological ages? **(3)**
12. Outline the uses of energy. Explain the different sources of energy resources. **(3)**
13. i. Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
    a. Mica mine
    b. Iron ore exporting port

    ii. Locate and Label Durg iron ore mine with appropriate symbols on the same map given for identification **(3)**



14. Write a short note on Bauxite, its formation, features and distribution in India. **(5)**
15. How would you classify the types of coal depending on the degrees of compression? **(5)**

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Answers

1. b. Ankeleshwar

   Explanation: Ankeleshwar is the most important field of Gujarat. Gujarat's oil wells are at Amkleswar (largest), Cambay, Kalol, Kosamba, Mehsana, Nowgam, Dholka, Lunej, Sananda, Wavel Bakal and Kathana.

2. b. iron ore

   Explanation: Iron ore is the basic mineral and the backbone of industrial development. India is endowed with fairly abundant resources of iron ore. Iron is the backbone of the industrial development of a country. Iron and steel is the basic industry and it provides raw materials, all types of machinery to run other industries.

3. d. fuel

   Explanation: Energy can be generated from fuel minerals like coal, petroleum, natural gas, uranium and from electricity. Energy resources can be classified as conventional and nonconventional sources. Fuel minerals are minerals that can be used for fuel. They are carbonaceous fuels stripped from the earth. There are three main types of fuel minerals and they are coal petroleum, and natural gas. These are also known as fossil fuels.

4. a. hot springs

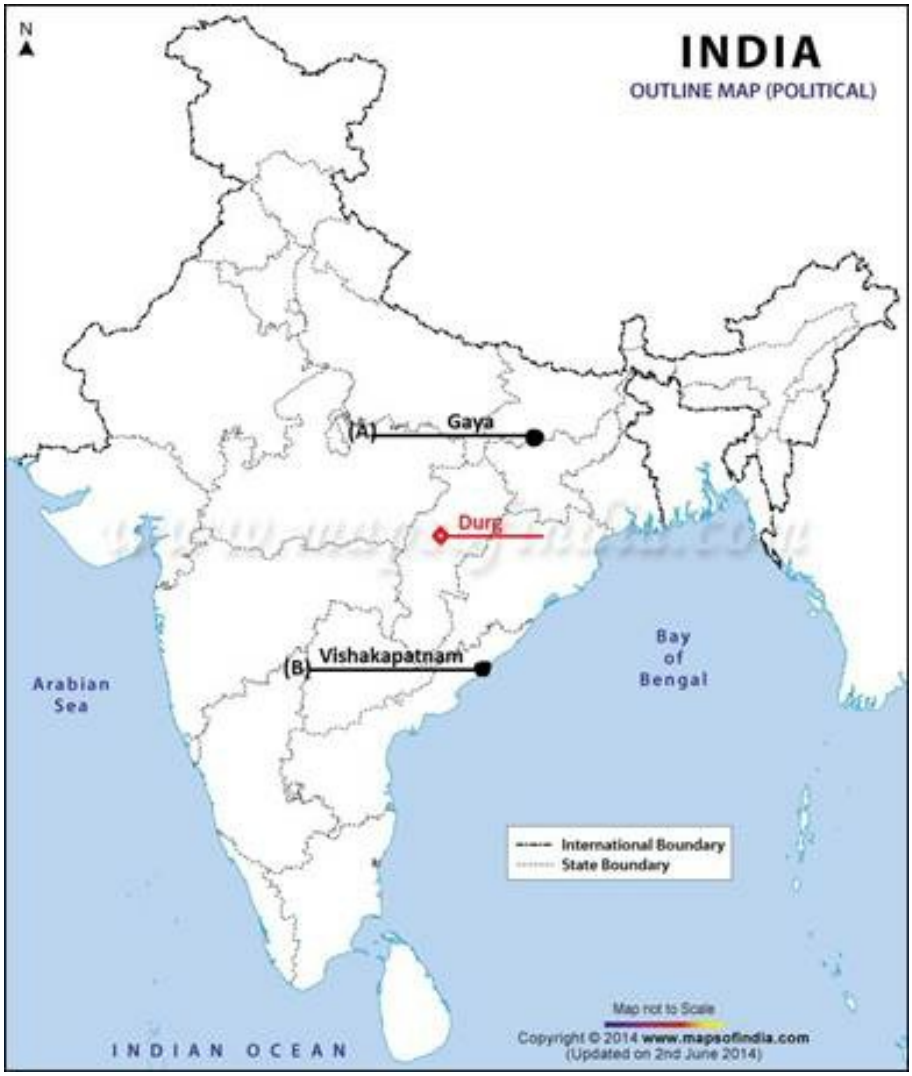
   Explanation: There are several hundred hot springs in India, which could be used to generate electricity. Two experimental projects have been set up in India to harness geothermal energy.

5. a. thorium

   Explanation: The Monazite sands of Kerala is rich in Thorium.
   Thorium, is also available in Jharkhand and the Aravalli ranges of Rajasthan. It is used for generating atomic or nuclear power.
   When an alteration is made in the structure of atoms, much energy is released in the form of heat and this is used to generate electric power.

6. Iron ore is exported to Japan and South Korea from Vishakhapatnam port.
7. India’s largest solar power plant of 100 MW capacity is located at Kamuthi in Tamil Nadu. The Kamuthi solar plant is the world's second largest solar park with a capacity of 648 MW commissioned by Adani Power.
8. copper is used in electrical cables as it is malleable, ductile and a good conductor of heat and electricity. Therefore, it allows electricity to flow through them easily.
9. Iron-ore is transported from Kudremukh mines to a port near Mangaluru as slurry through pipelines.
10. The contribution of coal in the installed capacity of electricity is 62 per cent. The share of coal is continuing to be highest because of the following facts:
    i. India has a huge resource of coal of different kinds, such as anthracite, bituminous, lignite and peat.
    ii. The potential of India in the field of hydel power is quite high but only one-sixth has been derived developed.
    iii. Electricity produced by nuclear plants is only in the initial stages. This is not properly developed.
11. Classification of coals on the basis of geological ages are:
    i. Gondwana Coalfields: The Gondwana coalfields are 250 million years of age. The major resources of Gondwana coal which are metallurgical coal are located in Damodar valley (West-Bengal-Jharkhand). Jharia, Raniganj, Bokaro and important coalfields. The Godavari, Mahanadi, Son and Wardha valleys also contain coal deposits.
    ii. Tertiary Coalfields: The Tertiary coalfields are only 55 million years old. Tertiary coals occur in the north-eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland.
12. Uses of energy: Energy is required for all activities. It is needed to cook, to provide light and heat, to propel vehicles and to drive machinery in Industry.
    Sources of energy: Energy can be produced through conventional and non-conventional sources.

i. Energy can be generated from non-conventional sources include, solar energy, wind, tidal, geothermal, biogas and atomic energy.
ii. Energy is also generated from conventional sources which includes, firewood, cattle dung cake, coal, petroleum, natural gas and electricity both hydel and thermal.

13. 

14. Bauxite is a clay-like substance from which alumina and later aluminium is obtained. Aluminium is an important metal because it combines the strength of metals such as iron, with extreme lightness and also with good conductivity and great malleable ability.
Formation: Bauxite deposits are formed by the decomposition of a wide variety of rocks rich in aluminium silicates.
Distribution:

i. Bauxite is found in the Amarkantak Plateau, Maikal Hills and the plateau region of Bilaspur-Katni.
ii. Odisha is the largest bauxite producing state in India.
iii. Panchpatmali deposits in Koraput district are the most important bauxite deposits in the state.
iv. 45 per cent of the country's total production in 2000-01 was in Odisha.

15. Following are the types of coal depending upon the degree of compression:

i. Peat: Decaying plants in swamps produced peat, which has a low carbon and high moisture contents. It has very low heating capacity.
ii. Lignite: Lignite is a low grade brown coal, which is soft with high moisture content. The principal lignite reserves are in Neyveli in Tamil Nadu and used for generation of electricity.
iii. Bituminous: Coal that has been buried deep and subjected to increased temperature is bituminous coal. It is the most popular coal in commercial use. Metallurgical coal is high grade bituminous coal which has a special value for smelting iron in blast furnace.
iv. Anthracite: It is highest quality hard coal.