CBSE Test Paper - 01

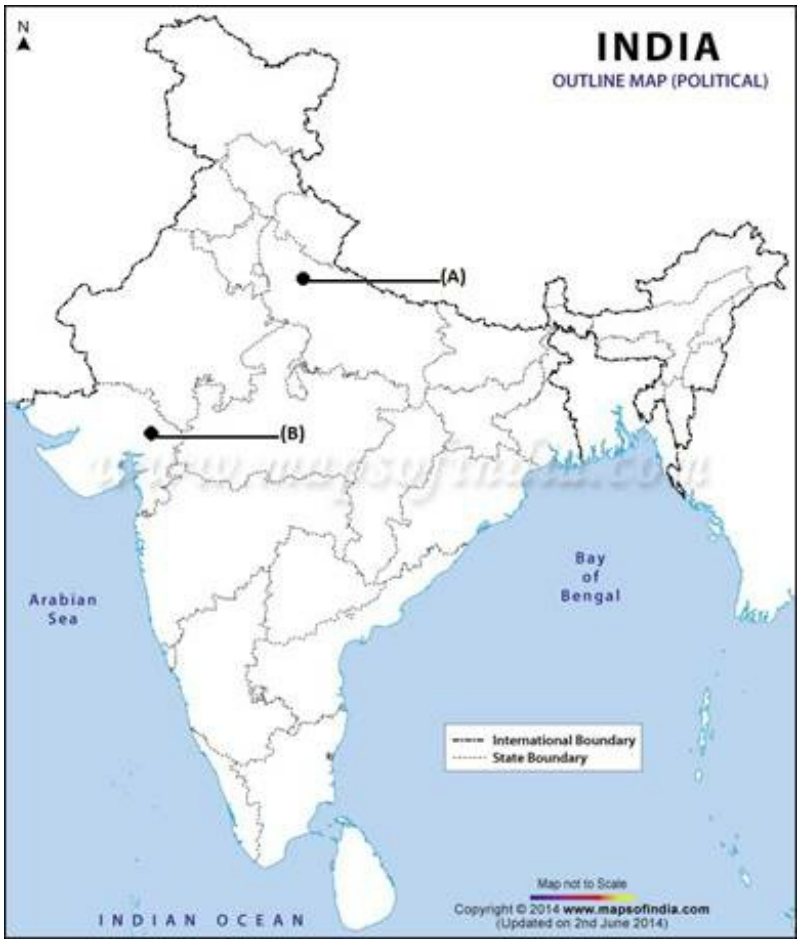
Chapter - 13 Minerals and Energy resources

1. Minerals are a _____ part of our lives. **(1)**
   a. useful
   b. vital
   c. important
   d. indispensable
2. Oceanic tides can be used to generate _____ **(1)**
   a. electricity
   b. gas
   c. transport
   d. fuel
3. Which is the oldest oil producing state of India? **(1)**
   a. Rajasthan
   b. Assam
   c. Maharashtra
   d. Gujarat
4. What did Haban see in Guwahati and he think of them as houses? **(1)**
   a. shopping complex
   b. buildings
   c. buses and Trains
   d. multiplex
5. The vast alluvial plains of North India are almost devoid of _____. **(1)**
   a. Rock minerals
   b. economic minerals
   c. petro minerals
   d. fuel minerals
6. What types of minerals are mainly obtained from veins and lodes? **(1)**
7. Which mineral is found abundantly in the monazite sand? **(1)**
8. How do the geologists define minerals? **(1)**
9. Name the regions containing the highest and the lowest amounts of mineral deposits

in India. **(1)**

10. Can you illustrate some suggestions to conserve minerals? **(3)**
11. Name any one rock mineral. Write about its formation. Name the industry in which it is used. **(3)**
12. How the people of rural areas get benefited from the setting up of biogas plants? **(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. Nuclear Plant
    b. Oil Field

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



14. Why there is a need of conservation of minerals? **(5)**
15. Explain the different forms of occurrence of minerals. **(5)**

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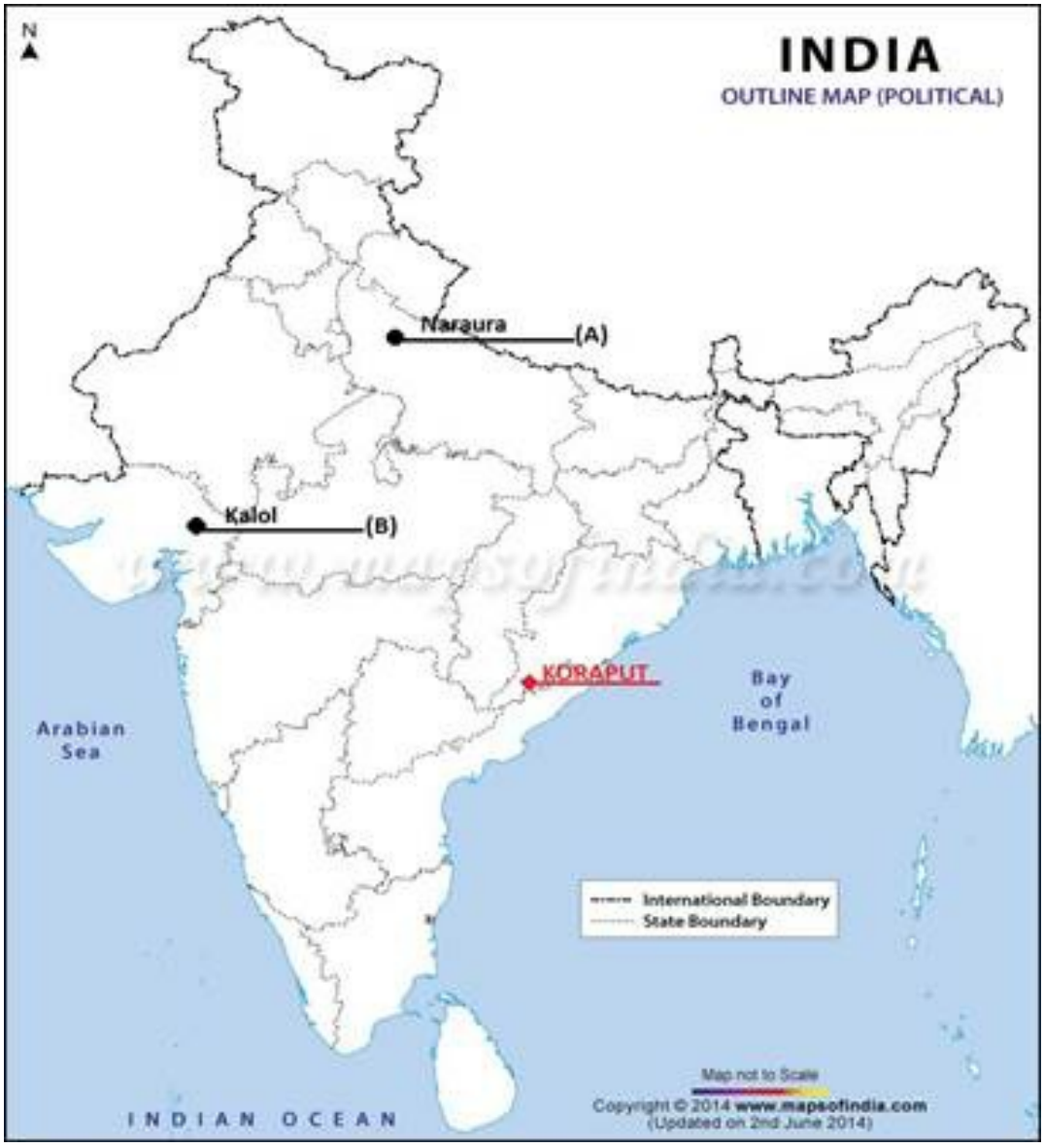
Answer

1. d. indispensable
   Explanation: Minerals are an indispensable part of our lives. Almost everything we use, from a tiny pin to a towering building or a big ship, all are made from minerals. In all the stages of development, human beings have used minerals for their livelihood, decoration, festivities, religious and ceremonial rites.
2. a. electricity
   Explanation: Oceanic tides can be used to generate electricity. Floodgate dams are built across inlets. During high tide water flows into the inlet and gets trapped when the gate is closed. Tidal energy is produced through the use of tidal energy generators.
3. b. Assam
   Explanation: Assam is the oldest oil producing state of India. Digboi, Naharkatiya and Moran-Hugrijan are the important oil fields in the state. Digboi has the distinction of being India's oldest continuously producing oilfield.
4. c. buses and Trains
   Explanation: Haban sees people getting into strange house like objects which move along the road. He also sees a “kitchen” dragging a number of house along with it. He is amazed and asked his father “Why don’t our houses move like the one we saw in Guwahati, Ba?” Ba replies, “These are not houses, they are buses and trains. Unlike our houses these are not made of bricks and stones, metal like iron and aluminum are used in making these.
5. b. economic minerals
   Explanation: The vast alluvial plains of north India are almost devoid of economic minerals. These variations exist largely because of the differences in the geological structure, processes and time involved in the formation of

minerals.

6. Major metallic minerals like Zinc and tin are mainly obtained from Veins and Lodes.
7. Monazite sand is found in Kerala and the mineral which is found abundantly in monazite sand is thorium.
8. According to the geologists, minerals are homogeneous, naturally occuring substance with a definable internal structure.
9. Regions having the highest amount of mineral deposit are the areas of peninsular plateau and the regions having lowest amount of mineral deposits are the Northern Plains.
10. Minerals can be conserved in the following ways:
    i. A concerted effort has to be made in order to use our mineral resources in a planned and sustainable manner.
    ii. Improved technologies need to be constantly evolved to allow use of low grade ores at low costs.
    iii. Recycling of metals, using scrap metals and other substitutes are steps in conserving our minerals resources for future.
11. Limestone is a rock mineral. It is found in association with rocks composed of calcium carbonate or calcium and magnesium carbonates.
    It is found in sedimentary rocks of most geological formations.
    Limestone is the basic raw material for cement industry and essential for smelting iron ore in the blast furnaces.
12. People in rural areas get benefited from the setting up of biogas plants as they use shurbs, farm waste, animal and human waste to produce biogas for domestic consumption. The plants using cattle dung are known as 'Gobar gas plants' in rural areas. Theses provide twin benefits to the farmer of rural areas - first in the form of energy and second, the farmers also get improved quality of manure. Biogas is by far the most efficient use of cattle dung. It also prevents the loss of trees and manure due to burning of fuel wood and cow dung cakes.

13. 

14. Conservation of minerals is necessary because:

    i. The total volume of workable mineral deposits in an insignificant fraction i.e. one per cent of the earth's crust.
    ii. We are rapidly consuming mineral resources that required millions of years to be created and concentrated.
    iii. The geological processes of mineral formation are so slow that the rates of replenishment are infinitely small in comparison to the present rates of consumption.
    iv. Mineral resources are finite and non-renewable.
    v. Mining of minerals causes great threat to the environment and health of the human beings.

Hence, it is needed to conserve the minerals and use them in a judicious way.

15. The difference forms of occurrence of minerals are:

    i. In igneous and metamorphic rocks: In igneous and metamorphic rocks minerals may occur in cracks, crevices, faults and joints. The smaller occurrence is called veins and the larger are called lodes. Major metallic minerals like tin, copper, zinc and lead, etc. are obtained from veins and lodes.
    ii. In sedimentary rocks: In sedimentary rocks a number of minerals occur in beds and layers. They have been formed as a result of deposition, accumulation and concentration in horizontal strata. Coal and some forms of iron ore have been concentrated as a result of long periods.
    iii. Through decomposition of surface rocks: Another mode of formation involves the decomposition of surface rocks, and the removal of soluble constituents, leaving a residual mass of weathered material containing ores. Bauxite is formed in this way.
    iv. Alluvial deposits: Certain minerals may occur as alluvial deposits in sands of valley floors and the base of hills. These deposits are called placer deposits.
    v. In ocean water and ocean beds: The ocean water contains vast quantities of minerals. Common salt, magnesium and bromine are largely derived from ocean water. The ocean beds too are rich in manganese nodules.