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Founder, MISSION GYAN**Chapter-5 | Minerals and Energy
Resources****Worksheet-1****Multiple Choice Questions**

- Which mineral is found in the Amarkantak plateau, Maikal hills and the plateau region of Bilaspur-Katni?
(a) Iron (b) Coal
(c) Bauxite (d) Tin
- Which of the following minerals are formed due to alluvial deposits?
(a) magnesium, gypsum (b) sodium, potassium
(c) gold, silver (d) iron, coal
- In which one of the following States is Rawatbhata Nuclear Energy Plant located?
(a) Punjab (b) Kerala
(c) Gujarat (d) Rajasthan
- The vast alluvial plains of North India are almost devoid of _____.
(a) petro minerals (b) rock minerals
(c) economic minerals (d) fuel minerals
- What does Haban see in Guwahati and he thinks of them as houses?
(a) buses and Trains (b) multiplex
(c) buildings (d) shopping complex
- In igneous and metamorphic rocks minerals may occur in the _____.
(a) cracks (b) faults or joints
(c) All of these (d) crevices
- Which is the oldest oil-producing state of India?
(a) Gujarat (b) Maharashtra
(c) Assam (d) Rajasthan
- Geographers study minerals as part of the earth's crust for a better understanding of _____.
(a) weather conditions (b) landforms
(c) resources (d) atmosphere
- Which one of the following industries uses bauxite as a raw material?
(a) Cement (b) Iron and Steel
(c) Chemical (d) Aluminium smelting

10. How many major iron belts are in India?

- (a) six (b) five
(c) four (d) three

Fill in the blanks :

11. _____ coals occur in the northeastern states of Meghalaya, Assam, Arunachal Pradesh, and Nagaland.
12. Energy sources like solar energy, wind, tide, biomass, and energy from waste material. These are called _____.

True / False

13. Granite is the basic mineral and the backbone of industrial development.
14. Kakrapar Atomic power plant is located in Gujarat.

Very Short Type Questions

15. Minerals occur in igneous and metamorphic rocks. Explain the statement with example.
16. Name the State where Naraura Nuclear Plant is located.

Short Type Questions

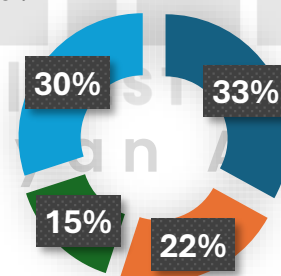
17. Why is mica considered the most important mineral in the electric and electronic industries? Give three reasons.
18. Distinguish between Natural Gas and Bio Gas.

Essay Type Questions

19. Highlight the importance of petroleum. Explain the occurrence of petroleum in India
20. Explain any five types of non-conventional sources of energy developed in India.

HOTS

21. Study the given chart carefully and answer the following questions:
- a. Which state is the largest producer of manganese in India?
- b. What is the use of manganese?
- c. What is the share of Madhya Pradesh in the production of manganese ore?



■ Orissa
■ Madhya Pradesh
■ Karnataka



Chapter-5 | Minerals and Energy Resources

Worksheet-1 Answer & Solution

1. (c) India's bauxite deposits are mainly found in the Amarkantak plateau, Maikal hills and the plateau region of Bilaspur-Katni. Odisha was the largest bauxite producing state in India with 34.97 percent of the country's total production in 2009-10.
2. (c) Certain minerals may occur as alluvial deposits in sands of valley floors and the base of hills. These deposits are called 'placer deposits' and generally contain minerals, which are not corroded by water. Gold, silver, tin, and platinum are most important among such minerals.
3. (d) Rajasthan
4. (c) 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.
5. (a) Haban sees people getting into a strange house like objects which move along the road. He also sees a "kitchen" dragging a number of houses 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 aluminium are used in making these.
6. (c) In igneous and metamorphic rocks, minerals may occur in the cracks, crevices, faults or joints. The smaller occurrences are called veins and the larger is called lodes.
7. (c) Assam is the oldest oil-producing state of India. Digboi, Naharkatiya, and Moran-Hugrijan are important oil fields in the state. Digboi has the distinction of being India's oldest continuously producing oilfield.
8. (b) Geographers study minerals as part of the earth's crust for a better understanding of landforms. The distribution of mineral resources and associated economic activities are of interest to geographers. A geologist, however, is interested in the formation of minerals, their age, and their physical and chemical composition. Geographers also study phenomena above the ground and how the features of the planet - ranging from climate to landforms like mountains - affect humanity.
9. (d) Aluminium smelting
10. (c) There are four major iron belts in India. Namely: Odisha-Jharkhand belt, Durg-Bastar-Chandrapur belt, Ballari-Chitradurg-Chikkamagalury-Tumakuru belt, and Maharashtra-Goa belt.

11. Fill in the blank : Tertiary

12. Fill in the blank : non-conventional energy sources

13. True and False : False

14. True and False : True

15.

- i. Minerals may occur in the cracks, crevices, faults or joints.
- ii. The smaller occurrences are called veins and the larger are called lodes.
- iii. In most cases they are formed when minerals in liquid/molten and gaseous forms are forced upward through cavities towards the earth's surface. For example, tin, copper, zinc and lead.

16. The Narora Power plant is located in the Bulandshahar district of the state of Uttar Pradesh. It's one of the nuclear power stations in the country, contributing to India's nuclear energy production.

17. Mica is:

- i. The excellent dielectric in strength and has a low powerless factor.
- ii. It has insulating properties and resistance to high voltage.
- iii. Most indispensable mineral used in electric and electronic industries.

18. Natural gas:

- i. It is a mixture of combustible gaseous hydrocarbons occurring in the rocks of the earth's crust.
- ii. This is commercial energy.
- iii. It is used as a raw material in the petrochemicals.

iv. It is transported from one place to another through the pipeline.

v. Mostly used in urban areas.

Biogas:

- i. It is derived by decomposition of waste of animals and plants with the help of microorganism in the presence of water.
- ii. Non-commercial energy.
- iii. It is produced in tanks.
- iv. It is found in rural areas.

19. Petroleum is formed from the remains of dead plants and animals. It is referred to as "Black Gold." This name itself is an indication of its importance to humans. Crude oil is considered to be the "mother of all commodities" as it is used to manufacture various products such as pharmaceuticals, plastics, gasoline, synthetic fabrics, etc.

Importance of Petroleum:

- i. Petroleum is the major energy source in India.
- ii. It provides fuel for heat and lighting.
- iii. It provides lubricant for machinery.
- iv. It provides the raw material for a number of manufacturing industries.
- v. Petroleum refineries act as a nodal industry for synthetic, textile, fertilizer and chemical industries.

An occurrence:

- i. Most of the petroleum occurrences in India are associated with anticlines and fault traps.

ii. In regions of folding, anticline or domes, it, occurs where oil is trapped in the crest of the up fold.

iii. Petroleum is also found in fault traps between porous and non-porous rocks.

20. The growing consumption of energy has resulted in a pressing need to use renewable energy sources like solar energy, wind, tide, biomass and energy from waste material. These are called non-conventional energy sources. India is blessed with an abundance of sunlight, water, wind and biomass. It has the largest programmes for the development of these renewable energy resources.

i. **Solar energy:** India is a tropical country. It has enormous possibilities of tapping solar energy. Photovoltaic technology converts sunlight directly into electricity. Solar energy is fast becoming popular in rural and remote areas. The largest solar plant of India is located at Madhapur, near Bhuj, where solar energy is used to sterilize milk cans.

ii. **Wind power:** India now ranks as a wind super power in the world. The largest wind farm cluster is located in Tamil Nadu from Nagarcoil to Madurai.

iii. **Biogas:** Shrubs, farm waste, animal and human waste are used to produce biogas for domestic purpose in rural area. Decomposition of organic matter yields gas, which has higher thermal efficiency in comparison to kerosene, dung cake and charcoal.

iv. **Tidal energy:** 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. From that stored water electricity is generated.

v. **Geo thermal Energy:** Geothermal energy refers to the heat and electricity produced by using the heat from the interior of the earth.

21.

i. Odisha is the largest producer of manganese ore in India.

ii. Manganese is mainly used in the manufacture of steel.

iii. Madhya Pradesh produces about 22% of the total manganese.

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