Minerals And Energy Resources

Practice Questions

Q. 1. Give two examples of non-metallic minerals.

Answer: Non-metallic minerals are those minerals **which don't include the qualities of the metallic minerals like density, malleable, ductile and good conductor of heat and electricity. For example – Salt and Potash**

NOTE – other examples are – Mica, Sulphur, Granite, Limestone, Marble, Sandstone, etc.

Q. 2. Which minerals are indispensable for electric and electronic industries?

Answer: Mica is one of the minerals which is indispensable for electric and electronic industries. It is a mineral formed by the series of plates or leaves and can be clear, black, green, red, yellow or brown. Mica mineral easily splits into thin sheets which can be layered into a mica sheet of a few centimetres high. It is indispensable for electric and electronic industries because of excellent Di- electric strength, low power loss factor, insulating properties and resistance to high voltage.

Mica is usually found in the Northern edge of the Chota Nagpur Plateau and the leading producer of Mica is the Koderma Gaya – Hazaribagh belt of Jharkhand. Ajmer in Rajasthan is another leading Mica producing area. Another important producer is the Nellore Mica belt of Andhra Pradesh.

Q. 3. Name the type of coal mining carried on in Meghalaya.

Answer: Rat hole Mining is the type of coal mining carried on in Meghalaya. In India, to extract minerals, individual needs the due permission of the government as most of the minerals are nationalised or acquired by the government of the country. In case of Meghalaya, it is different; coal mines in the tribal areas of North-east India are acquired by the individuals and communities rather than the government. Large deposits of coal, iron ore, limestone and dolomite, etc are found in Meghalaya. In Jowai and Cherapunjee, coal mining is done by family members by digging a long narrow tunnel, which is referred to as 'Rat hole Mining'.

Q. 4. Where is an experimental geothermal energy project located in India?

Answer: The term 'Geothermal energy' refers to the electricity and the heat that is generated by using the heat from the interior of the Earth. **Parvati Valley near Manikaran in Himachal Pradesh and Puga Valley, Ladakh is the places where an experimental geothermal energy project has been set up.**

Q. 5. What are ores? Give example. What are 'placer deposits'? Give example of mineral found in such deposits.

Answer: The term **'Ores' is referred to the gathering of such minerals which are mixed with other elements.** To make its extraction sodium salt, the mineral content should be in sufficient concentration of the ore. For example – Iron ore is the basic mineral with excellent magnetic qualities. India is one such country with good quality of iron ores. Magnetite and Hematite are the finest and important industrial iron ores respectively.

'Placer deposits' have those minerals which are not destroyed by the water. These are such minerals which are found as alluvial deposits in sands of valley floors and the base of hills. Minerals found in such deposits are **Gold, Silver, Tin and Platinum.**

Q. 6. "Mineral resources in India are unevenly distributed." Support the statements with three suitable examples.

Answer: Yes, it is true that "Mineral resources in India are unevenly distributed." India is one such country which acquires rich and different types of mineral resources. The uneven distribution is due to the fact that India as a country has variation in Geological structure, processes and difference in time involved in the formation of minerals. Three examples to support this statement are as follows:

• The majority of the coal reserves, metallic minerals, Mica and other non-metallic minerals are found in peninsular rocks.

• Most of the petroleum deposits are found sedimentary rocks in the Western and Eastern flanks of the Peninsula, in Gujarat and Assam.

• Reserves of the non-ferrous minerals are found in Rajasthan with the rock systems of the Peninsula. Moreover, there is a lack of economic minerals in the vast alluvial plains of North India.

Q. 7. What are the uses of copper? Name the two leading copper production states of India.

Answer: Even though India has rich and varied minerals available the availability and production of copper were poor.

The various uses of Copper are as follows:

• Copper consist the quality like ductility and malleability.

• It is also a good conductor of heat and electricity.

• Copper as a mineral is mainly used in electrical cables, electronics and chemical industries.

The two leading copper production states of India are – 52% of India's copper is produced in the **Balaghat mine in Madhya Pradesh** and another leading producing of copper is **Singbhum district of Jharkhand.** Also, Khetri mines in Rajasthan are the popular copper mines of India.

Q. 8. Why is there a pressing need to use non-conventional sources of energy in India? Give three reasons.

Answer: Non-conventional sources of energy are those forms of energy which is renewable and unlimited. It doesn't cause environmental pollution. Solar energy, Wind, Tide, Biomass and energy from waste material are the non-conventional sources of energy. Various reasons to prove why it is necessary to use non-conventional sources of energy –

• As the country is developing, the consumption of energy is also growing which led to an increase in the use of fossil fuels like coal, oil and gas. This caused serious environmental problems.

• As the prices of the oil and gas are increasing and also, increasing usage of such energy sources might lead to its shortage which will affect the security of energy supply for the future generation.

• This will cause various consequences on the growth of the national economy of the country.

Q. 9. Name the ore from which aluminium is obtained. Why is aluminium considered to be an important metal? Name the areas which have rich deposits of the ore of aluminium.

Answer: Aluminium is obtained from the **Bauxite Ore.** There are many ores that contain aluminium but Bauxite is clay-like substance from which alumina and later aluminium are acquired. It is formed by the decomposition of the different types of rocks which contains aluminium silicates.

Aluminium is considered to be an important metal because it contains the strength of the metal like iron. It has good conductivity, great malleability and is extremely light.

The areas which have rich deposits of the ore of aluminium are **– Amarkantak Plateau, Maikal hills, plateau region of Bilaspur-Katni.** According to the country's total production of 2000-2001, **Orissa is the largest Bauxite producing state in India and the most important Bauxite deposit are the Panchpatmali deposits in Koraput district.**

Q. 10. Highlight the importance of petroleum. Explain the occurrence of petroleum in India.

Answer: After Coal, Petroleum is the major energy source in India. Also called as Mineral oil, there is various importance of Petroleum –

• Petroleum serves as the fuel for heat and lighting, as lubricants for machinery and as raw material for manufacturing industries.

• Refineries of petroleum act as the 'Nodal industries'. Nodal industries are those industries around which such industries develop which manufacture the goods produced by the Nodal industries. Petroleum refineries serve as the Nodal industries for synthetic textile, fertiliser and for chemical industries.

Petroleum occurs in the tertiary age through anticlines and fault traps in the rock formations. It also occurs where oil is trapped in the crest of the upfold in the regions of anticlines, folding or domes. This layer of oil is a porous limestone or sandstone from which oil flows and because of the non-porous layers, oil is stopped from rising or sinking. Between the porous and non-porous rocks, petroleum is found in fault traps.

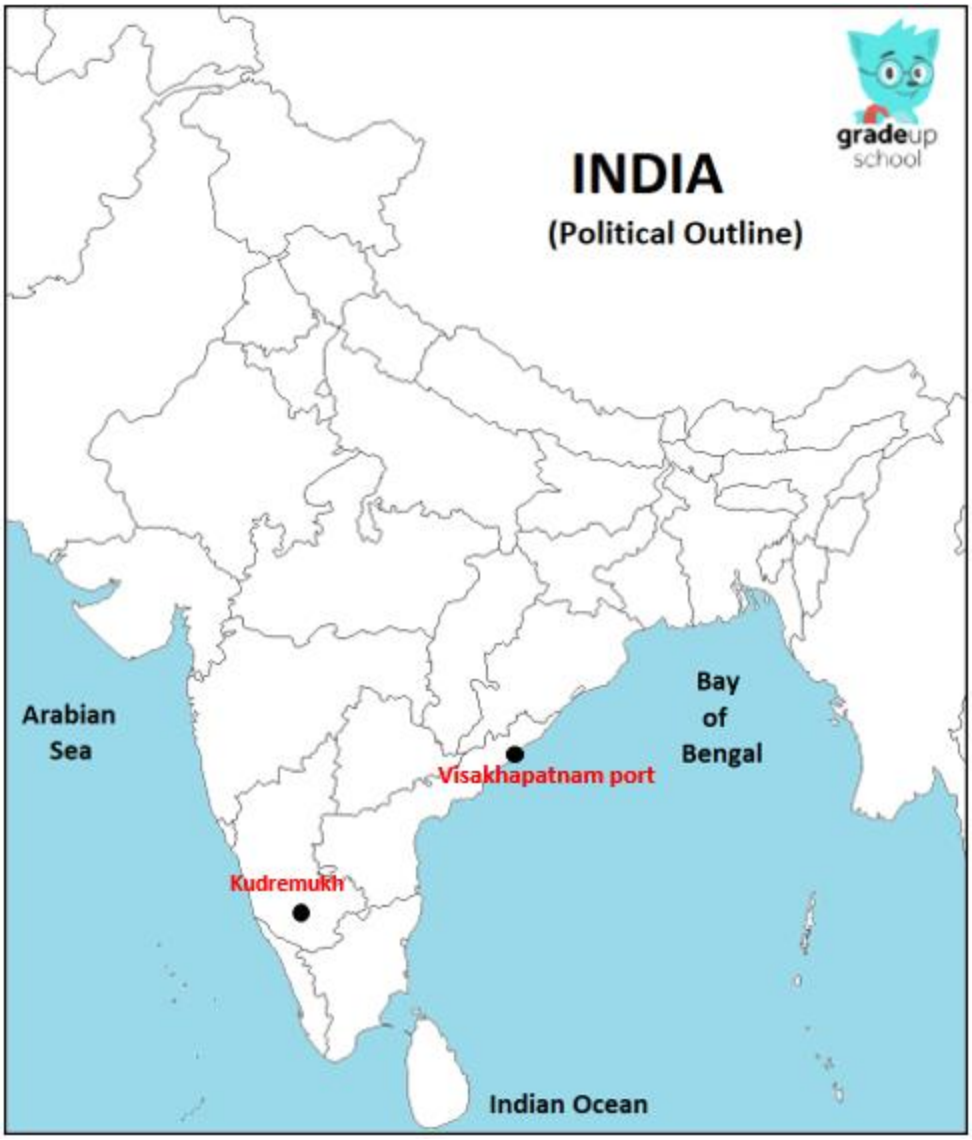
From Mumbai High, 63% of India's petroleum production was obtained and 18% and 16% from Gujarat and Assam respectively. In Gujarat, Ankleshwar is the most important field. The oldest oil-producing state in India is the Assam where Digboi, Nahrkatiya and Moran-Hugrijan are the important oil fields.

Q. 11. Two features A and B are marked on the given political map of India. Identify them with the help of following information and write their correct names.

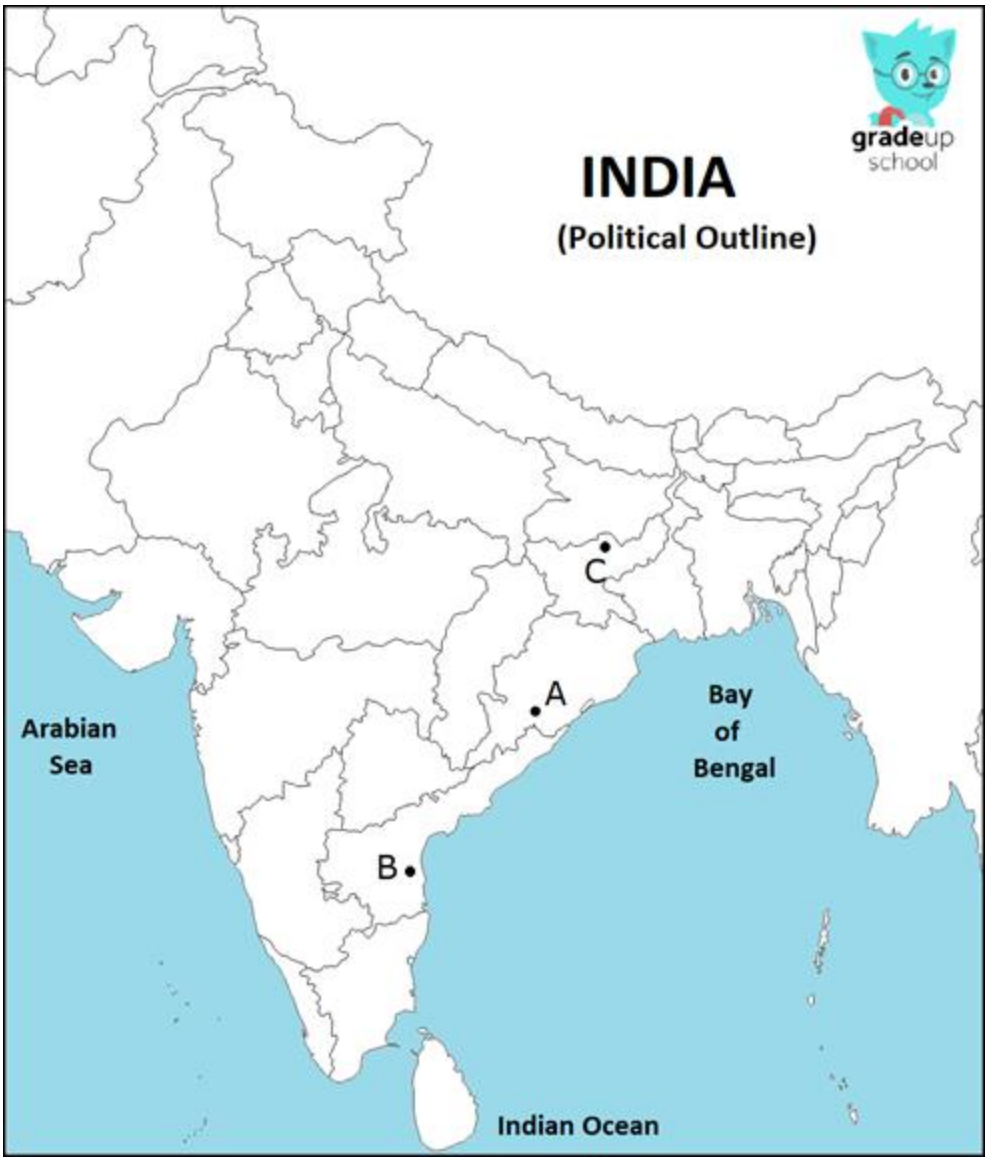
A. Name the state in which the Kudremukh iron-ore mines are located.
B. A port from where ore is expected to Japan

Answer: A. Name the state in which the Kudremukh iron-ore mines are located – Western Ghats of Karnataka

B. A port from where ore is expected to Japan – Visakhapatnam port



Q. 12. Three features A, B and C are marked on the given political outline map of India. Identify them with the help of following information and write their correct names.



A. Important bauxite deposits in Orissa.
B. Mica belt in Andhra Pradesh
C. Coal mine

Answer: A. Important bauxite deposits in Orissa – Panchpatmali deposits in Koraput district.

B. Mica belt in Andhra Pradesh – Nellore Mica belt of Andhra Pradesh

C. Coal mine –Bokaro in Jharkhand

Q. 13. On the given political map of India locate and label the following with appropriate symbols.

A. Namrup Thermal Power plant

B. Singrauli Thermal Power Plant

C. Harduaganj Thermal power Plant

D. Korba Thermal Power Plant

E. Ramagundam Thermal Power Plant

F. Tuticorin Thermal Power Plant

G. Naraura Nuclear Power Plant

H. Rawat Bhata Nuclear Power Plant

I. Kakrapara Nuclear Power Plant

J. Tarapur Nuclear Power Plant

Answer: