

Short Answer Questions

Q.1. What is an ore?

Ans. Rocks containing a mineral in a concentrated form are called ores.

Q.2. Name the categories into which minerals can be divided.

Ans. Minerals can be divided into Metallic, Non-Metallic and Energy Mineral.

Q.3. (a) Name two varieties of iron ore used in industry.

(b) How is the low grade iron ore utilised?

Ans. (a) The two varieties of iron ore used in industry are the Magnetite and Haematite which contain over 68% of iron ore.

(b) Low grade iron ore is mainly used in industries for the purpose of smelting.

Q.4. (a) What grade of iron ore is mostly mined in India?

(b) Name two leading iron ore producing states.

Ans. (a) Haematite is the grade of iron ore mostly mined in India.

(b) The two leading iron ore producing states in India are Karnataka and Odisha.

Q.5. Name one centre in each of the following states where iron is mined:

(a) Odisha

(b) Jharkhand

Ans. (a) Odisha — Keonjhar, Mayurbhanj, Noamundi, etc.

(b) Jharkhand — Singhbhum, Palamau.

Q.6. Name one area in Odisha and one area in Chhattisgarh where iron ore is mined.

Ans. Odisha: Iron is found in Mayurbhanj, Cuttack, Sundergarh, Koraput.

Chhattisgarh: Bastar, Durg district.

Q.7. Give the names of four important types of iron ore found in India.

Ans. The three types of iron ore found in India are Magnetite, Haematite, Limonite and Siderite.

Q.8. Which by-product of iron ore is used to make rubber?

Ans. Benzene, a by-product of iron ore, is used to make rubber.

Q.9. Name two sea ports from where India exports iron ore.

Ans. The two sea ports from where iron ore is exported are Marmagao, Vishakhapatnam.

Q.10. State the most important use of the following:

(a) Iron ore

(b) Bauxite

Ans. (a) Iron ore is mainly used in the production of iron and steel and in the making of all machinery.

(b) Bauxite is used mainly for the extraction of aluminium, which is used in the making of aeroplane and electric wires.

Q.11. (a) Name two leading states producing manganese.

(b) Name one use of the mineral.

Ans. (a) Madhya Pradesh and Odisha are the two leading states producing manganese.

(b) Manganese is mainly used in the manufacturing of steel and ferro-manganese alloy.

- Q.12. Mention any two uses of manganese. [2014]
Ans. Manganese is used mainly in the manufacture of steel as it makes the steel tough and prevents rusting. It is also used in the making of paints and chemicals.
- Q.13. Name the ore of aluminium. Describe two main uses of aluminium. [2013]

Or

- (a) Name the metal extracted from Bauxite.
(b) Mention two uses of this metal. [2016]
Ans. Aluminium is extracted from bauxite. Aluminium is used in the making of aeroplanes and electric wires.

- Q.14. What is lignite? Name the two areas where lignite is found in India. [2011]
Ans. Lignite is a lower grade coal also known as brown coal. It contains about 50% of carbon. It contains a good deal of moisture and less of combustible matter.
Lignite is found in Neyveli (Tamil Nadu) and Palna (Rajasthan).

- Q.15. Name an important coal producing state in India and a coalmine located in that state.
Ans. West Bengal is an important coal producing state in India. Raniganj is an important coal mine located in the same state.

- Q.16. State two main drawbacks of the coal found in India.
Ans. The two main drawbacks of the coal found in India are:
(a) A large amount of coal has to be taken out from deep underground mines. Machinery cannot be used effectively.
(b) Most of the coalfields are in Odisha, West Bengal and Jharkhand. The industries in the northern and western parts have to pay higher prices as it has to be transported even greater distances.

- Q.17. Name the types of coal. Mention the type which is classified as a high grade variety.
Ans. The types of coal are anthracite, bituminous, lignite and peat. The anthracite variety is known to be of superior grade.

- Q.18. What is peat?
Ans. Peat is the inferior quality coal, having a low carbon content, more moisture and partly decomposed organic matter.

- Q.19. Which two industries use the maximum amount of coal?
Ans. The iron and steel industry and the railways use the maximum amount of coal.

- Q.20. Name the country which produces the largest amount of coal in South Asia.
Ans. India is the largest producer of coal in South Asia.

- Q.21. Name the two by-products of coal.
Ans. The two by-products of coal are naphtha and phenol.

- Q.22. Which of the different varieties of coal is used for domestic purposes and why? [2014]
Ans. The anthracite variety of coal is ideal for domestic purposes because it is smokeless with a high calorific value.

- Q.23. Classify the Coalfields in India. Name one state for each classification.
Ans. Coalfields are classified into two: Gondwana and Tertiary.
The Gondwana coalfields are found in the Damodar Valley (West Bengal) and the Tertiary coalfields are found in the Namchuk coalfields (Assam).

- Q.24. (a) Name any three types of coal found in India. [2016]
(b) Which type of coal is mostly used in iron and steel industries?
Ans. (a) The three types of coal found in India are anthracite, bituminous and lignite.
(b) Bituminous coal is mostly used in iron and steel industries.

Q.25. Name one oil refinery in the private sector.

Ans. Reliance Group of industries.

Q.26. (a) Which state is the largest producer of mineral oil?

(b) Name any two off-shore oil fields in India.

Ans. (a) Maharashtra produces the largest amount of mineral oil.

(b) Mumbai High and Bassein are the two off-shore oilfields of India.

Q.27. Name two important oilfields in India.

Ans. The two important oilfields in India are Digboi and Mumbai High.

Q.28. Where was the first oil well drilled in India?

Ans. The first oil well drilled in India was at Makum in Assam.

Q.29. What is 'Mumbai High'?

Ans. Mumbai High is a region located 176 km north-west of Mumbai. It produces 1/3 crude oil output of India.

Q.30. Mention two products of an oil refinery. Name two oil refineries in India, one along the coast and one away from the coast.

Ans. The two products of an oil refinery are kerosene and diesel.

An oil refinery along the coast is in Mumbai High region. Mathura oil refinery lies away from the coast.

Q.31. From which rocks is mineral oil obtained?

Ans. Mineral oil is obtained from sedimentary rocks.

Q.32. How is oil transported to countries situated far away?

Ans. Oil is transported through oil tankers and pipelines.

Q.33. What is crude oil?

Ans. The oil which is taken out from rocks. It contains impurities at this stage.

Q.34. Name two oilfields of Assam.

Ans. The two important oilfields of Assam are: Digboi Oilfields and Naharkatiya.

Q.35. Besides Assam, name two other states producing oil in the north-east of India.

Ans. Arunachal Pradesh and Tripura.

Q.36. Name two oilfields of Gujarat?

Ans. Lunej and Ahmedabad.

Q.37. What does ONGC stand for and what is its primary work?

Ans. Oil and Natural Gas Corporation. Its primary work is that of research, development and exploration of oil.

Q.38. What do the following stand for LPG and CNG?

Ans. LPG — Liquefied Petroleum Gas.

CNG — Compressed Natural Gas.

Q.39. Name the following:

(a) An offshore oil field in the Gulf of Cambay.

(b) An oil refinery in Bihar.

Ans. (a) Aliabet

(b) Barauni

Q.40. What are the uses of natural gas in India?

Ans. Natural Gas in India is mainly used for transport, industries, agriculture, cooking and for lighting

Q.41. Name the agency responsible for the exploration of gas in India.

Ans. Gas Authority of India (GAIL).

Q.42. Mention two advantages of hydro-electric power over coal and petroleum.

Ans. The two advantages of Hydro-electric Power over coal and petroleum are:

- (a) Hydel power is inexhaustible and renewable source of power whereas thermal power is exhaustible and non-renewable.
- (b) Hydel power projects do not cause any pollution whereas thermal power pollutes the atmosphere.

Q.43. Which factors favour the use of Hydroelectric Power?

Ans. The factors favouring the use of hydroelectricity are:

- (a) Does not cause pollution.
- (b) Easier to build than power station.
- (c) No wastage.
- (d) Inexhaustible and renewable.
- (e) Can be transported over long distances.

(any two)

Q.46. How do the non-conventional sources of energy score over the conventional sources of energy?
Ans. Non-conventional sources of energy are available freely in abundance. They are environment friendly and do not cause pollution. They are also cost effective.

Q.47. Explain the need to develop the alternative sources of energy.
Ans. There is need to develop non-conventional sources of energy due to the fast depletion of fossil fuels, required for producing thermal power and many problems faced with the production of nuclear and hydro-electric power.

Q.48. Which is the most abundant non-conventional source of energy?
Ans. The most abundant non-conventional source of energy is solar energy.

Q.49. Mention two purposes for which solar energy is being used.
Ans. Solar energy is being used for:

- (a) Direct solar heating
- (b) Solar electricity using photovoltaic cells.

Q.50. Name two states where wind farm projects have been undertaken.
Ans. Wind farm projects have been undertaken in the states of Tamil Nadu and Gujarat.

Q.51. For which two purposes is wind energy commonly used?
Ans. Wind energy is commonly being used for pumping water and flour mills.

Q.52. How do windmills generate electric power?
Ans. The kinetic energy of the wind runs the windmill which in turn runs the generator to produce electricity.

Q.53. Name an area in India which provides ideal conditions for exploiting tidal energy for generation of power.

Ans. The Gulf of Kutch provides ideal conditions for exploiting tidal energy for generation of power.

Q.54. Name two main minerals required for generating nuclear energy. Mention the nuclear power stations located in the states of Maharashtra and Tamil Nadu.

Ans. The two minerals required for generating nuclear energy are uranium, thorium and beryllium.
(any two)

The nuclear power stations in Maharashtra is Tarapur and in Tamil Nadu is Kalpakkam.

Q.55. State two reasons why biogas is considered an ideal domestic fuel.

Ans. Biogas is considered as ideal domestic fuel because:

- (a) Biogas is always available and can be used as and when required.
- (b) It can be installed even on a very small scale on individual basis.

Q.56. Name the organisation and the city where research is carried on in nuclear science.

Ans. Bhabha Atomic Research Centre at Trombay.

Q.57. Name the states in which the following power stations are located.

- (a) Tarapur
- (b) Kalpakkam
- (c) Narora

Ans. Power stations

- (a) Tarapur
- (b) Kalpakkam
- (c) Narora

States

Maharashtra

Tamil Nadu

Uttar Pradesh

Give reasons for the following

Q.58. Mention *two* reasons why minerals are important.

Ans. Minerals are important as they help in:

- (a) earning foreign exchange.
- (b) providing important raw materials for industries.

Q.59. Give geographical reasons why:

- (a) Anthracite is used for domestic purposes
- (b) Oil refineries are located close to oilfields or near ports
- (c) The location of coal fields is an important factor in industrial development. [2012]

Ans. (a) Anthracite is the best quality of coal and contains over 80% carbon. It ignites slowly, has the highest heating value and gives out minimum smoke. Therefore, it is used for domestic purposes.

(b) Most of the oil refineries are located along the coasts or in a coastal city so as to minimise the cost of transport and to avoid the risk of transporting it inside the country, due to its inflammable nature. 70% of mineral oil is imported to meet the Indian demand.

(c) It is very important that coalfields are located close to industries as they are an essential raw material and the price increases due to transportation costs as it is a bulky commodity.

Q.60. Give a geographic reason for each of the following:

- (a) Many port cities have their own oil refineries.
- (b) Petroleum is called a 'fossil fuel'.
- (c) Coal is called a versatile mineral. [2015]

Ans. (a) India imports a large amount of crude oil mainly from the Gulf countries. So most of the port cities have their own refineries.

(b) Petroleum is called fossil fuel as it is derived from organic plants and animal life which was buried in large quantities under the earth in the distant past. The deposition which occurred in layers prevented the complete decomposition of the organic matter. Pressure and heat caused oil and natural gas to be formed.

(c) Coal is called a versatile mineral as it can be put to a number of uses:
It is used in the production of electricity, in the railways, domestic fuels, iron and steel industry and as a raw material in fertilizers and synthetic industries, etc.

Differentiate between the following

Q.61. Anthracite coal and Lignite coal.

Ans.	Anthracite coal	Lignite coal
	(a) Best variety of coal	(a) Low grade coal
	(b) 80% carbon	(b) 60% carbon
	(c) Highest heating value	(c) Produces less heat

Q.62. Gondwana coalfields and Tertiary coalfields.

Ans.	Gondwana coalfields	Tertiary coalfields
	Gondwana coalfields stretch from Bengal, Jharkhand, Bihar, Odisha to Madhya Pradesh. These are 250 million years old.	Tertiary coalfields are found in Assam, Meghalaya, Arunachal Pradesh, West Bengal, Jammu and Kashmir.

Q.63. Oil field and an Oil refinery.

Ans.

Oil field	Oil refinery
An oil field is that area which contains the strata containing oil. Crude oil is extracted with the help of structures called oil derricks.	An oil refinery is the place where oil is refined after extraction. After purifying it, other products such as diesel, petrol, kerosene and lubricants are obtained.

