

Section A

● Write the answer of the following questions. [Each carries 1 Mark] [12]

1. state gets maximum solar energy in India. (Maharashtra, Gujarat, Kerala)
2. For the growth and development of non-conventional energy sources, which organisation in Gujarat is functional in the field of solar energy ?
3. What is called minerals ?
4. What is called Pig Iron ?
5. Which types of Iron ore are there ?
6. Which minerals are obtained from metamorphic rocks ?
7. When and where was Bauxite found for the first time ?
8. From which district of Gujarat Bauxite is obtained ?
9. How was coal formed ?
10. Which are called renewable sources of energy ?
11. Which is the peculiarity of natural gas ?
12. How is mineral oil formed ?

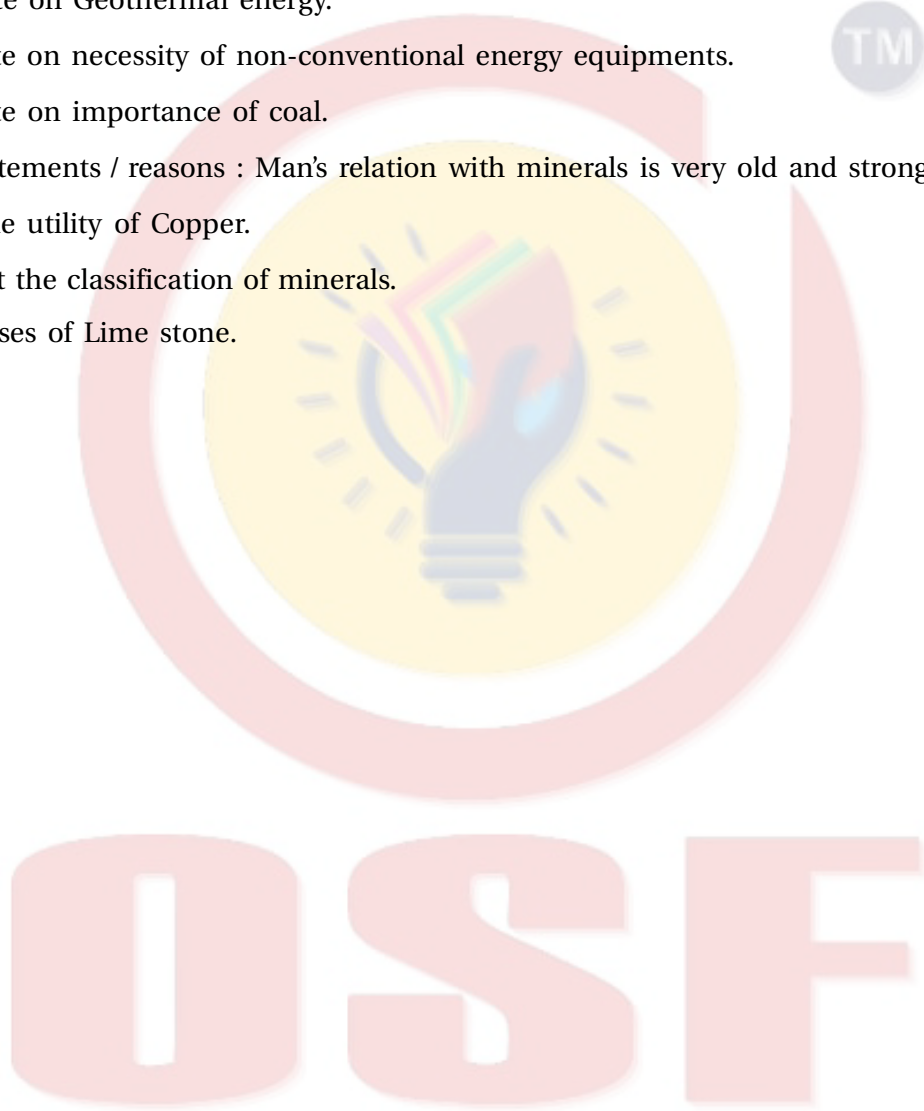
Section B

● Write the answer of the following questions. [Each carries 2 Marks] [26]

13. Explain why modern age is known as mineral age.
14. State the uses of Manganese.
15. Which remedies would you suggest as a future citizen to overcome the problem of shortage of mineral resources in future ?
16. Mention the characteristics and uses of copper.
17. Mention the utility of copper.
18. State the major places in India where iron is available.
19. Explain statements / reasons : Iron is considered to be the base of industrial development of modern world.
20. Explain statements / reasons : Coal is a multiuse/multipurpose resource.
21. State the major places where iron is available.
22. 'Modern age is known as mineral age'. Why ?
23. Why there is an increase in the usage of non-conventional energy today ?
24. Which states in India produce Manganese ?
25. State the major places in India where iron is available.

● Write the answer of the following questions. [Each carries 3 Marks]

26. By which process minerals are formed ?
27. Give lime stone producing places in Gujarat.
28. Write a note on 'Natural gas'.
29. Write a note on solar energy.
30. Write a note on wind energy.
31. Write a note on Bio-gas.
32. Write a note on Geothermal energy.
33. Write a note on necessity of non-conventional energy equipments.
34. Write a note on importance of coal.
35. Explain statements / reasons : Man's relation with minerals is very old and strong.
36. Mention the utility of Copper.
37. Write about the classification of minerals.
38. State the uses of Lime stone.



IMPORTANT QUESTIONS DAY 12

Section A

● Write the answer of the following questions. [Each carries 1 Mark] [12]

1. state gets maximum solar energy in India. (Maharashtra, Gujarat, Kerala)

➡ Gujarat

2. For the growth and development of non-conventional energy sources, which organisation in Gujarat is functional in the field of solar energy ?

➡ Try Yourself

3. What is called minerals ?

➡ The matter which is formed due to inorganic process and has a certain chemical composition is called a mineral.

4. What is called Pig Iron ?

➡ Iron is found in impure condition so it is mixed with coke and lime and heated in large furnaces for refining. The pure iron thus obtained is known as Pig Iron.

5. Which types of Iron ore are there ?

➡ There are 4 types of Iron ore. They are Haematite, Magnetite, Limonite and Siderite.

6. Which minerals are obtained from metamorphic rocks ?

➡ Slate, Marble and Diamond are obtained from metamorphic rocks.

7. When and where was Bauxite found for the first time ?

➡ Bauxite was found at Les-Baux for the first time in 1821 in France.

8. From which district of Gujarat Bauxite is obtained ?

➡ Bauxite is obtained from Jamnagar, Bhavnagar, Junagadh, Amreli, Surat and Sabarkantha district of Gujarat.

9. How was coal formed ?

➡ In earlier times, vegetation ruled on the earth. Due to tectonic movements this vegetation was buried in the interior. As a result the trees containing carbon contents and some animals underwent gradual combustion due to the internal heat and pressure. Due to this the vegetation was transformed into coal.

10. Which are called renewable sources of energy ?

➡ Tidal energy or hydel power, solar energy, Bio-gas, geothermal energy and Tidal energy are non-conventional sources of energy. They are also called renewable sources of energy.

11. Which is the peculiarity of natural gas ?

➡ Natural gas is associated with mineral oil. It comes out of it. It is cheaper and pollution free energy source.

12. How is mineral oil formed ?

➡ Animals and vegetation were buried in the interior of the earth and were converted into hydrocarbons. This form was in almost liquid form. Due to tectonic movements the layers of these

forms were gradually elevated towards the surface. Thus liquid mineral oil existed in liquid form layers is called mineral oil.

Section B

● Write the answer of the following questions. [Each carries 2 Marks]

[26]

13. Explain why modern age is known as mineral age.

➡ Try Yourself

14. State the uses of Manganese.

➡ Try Yourself

15. Which remedies would you suggest as a future citizen to overcome the problem of shortage of mineral resources in future ?

➡ Try Yourself

16. Mention the characteristics and uses of copper.

➡ Try Yourself

17. Mention the utility of copper.

➡ Try Yourself

18. State the major places in India where iron is available.

➡ Try Yourself

19. Explain statements / reasons : Iron is considered to be the base of industrial development of modern world.

➡ Iron is used very widely in the making of small pins to large machines, cars, trucks, ships, railways, bridges, building and weapons.

➡ It is used very widely.

➡ It is cheaper, strong and durable.

➡ Iron is easily available in most of the countries. Thus, it is considered to be the base of industrial development of modern world.

20. Explain statements / reasons : Coal is a multiuse/multipurpose resource.

➡ Usage of coal increased with the invention of steam engine. E.g. : Railway and Steamers are now easy to use.

➡ With the invention of electricity, coal became an important mineral for producing thermal electricity.

➡ Some byproducts are available from coal, like coal tar, ammonium gas, benzyl and crude oil.

➡ Thus, coal is a multiuse resource.

21. State the major places where iron is available.

➡ Maximum iron ore is obtained from Karnataka in India.

➡ Odisha, Jharkhand, Chhattisgarh and Andhra Pradesh are other producers respectively.

➡ Besides iron ore is found in Goa, Rajasthan, Tamil Nadu, Maharashtra, Madhya Pradesh, Kerala, Uttar Pradesh and Assam states.

22. 'Modern age is known as mineral age'. Why ?

➡ Today minerals are considered to be the back bone of economic development of any nation.

- ➡ Minerals have a large role in the human progress.
 - ➡ Today the contribution of minerals is notable in making of small pins to large machines.
 - ➡ Mineral is a natural resource. Man has used natural resources (mineral) in wide way as and when technical knowledge and modern equipments increased.
 - ➡ U.S. and Russia have become world powers only due to proper use of minerals. Both countries are rich in variety of minerals and prosperity.
 - ➡ Today India after independence going forward in the direction of super power of the world due to mineral deposits.
23. Why there is an increase in the usage of non-conventional energy today ?
- ➡ Resources like coal or mineral oil are available in limited quantity. Attempts started to conserve them for a longer time. Wind energy, Solar energy, Bio-gas, Tidal energy and Geothermal energy are included as alternative resources.
 - ➡ These are all renewable energy resources. Some identify them as inexhaustible resources.
 - ➡ In 1981 Commission for Additional Sources of Energy (CASE) was established in India. Moreover Gujarat Energy Development Agency (GEDA), Chhani, Vadodra is working in this direction.
24. Which states in India produce Manganese ?
- ➡ Odisha, Karnataka, Madhya Pradesh and Goa can be counted as major states.
 - ➡ Besides, Manganese is also obtained from Andhra Pradesh, Jharkhand, Rajasthan and Gujarat state.
25. State the major places in India where iron is available.
- ➡ Maximum iron ore is obtained from Karnataka in India.
 - ➡ Odisha, Jharkhand, Chhatisgarh and Andhra Pradesh are other producers respectively.
 - ➡ Besides iron ore is found in Goa, Rajasthan, Tamil Nadu, Maharashtra, Madhya Pradesh, Kerala, Uttar Pradesh and Assam states.

Section C

- Write the answer of the following questions. [Each carries 3 Marks] [39]
26. By which process minerals are formed ?
- ➡ The result of abiotic process which took place in the interior of the earth since the infinite time. The solid, liquid or gaseous matter which is formed due to specific abiotic process within the rocks in the interior of the earth has a certain chemical composition and homogeneous constitution and specific atomic structure is called mineral.
 - ➡ Iron, manganese, gold, silver etc. are included as solid minerals.
 - ➡ Mercury and petroleum are included as liquid mineral. While, natural gas is included as gaseous mineral.
 - ➡ Iron, copper, zinc, gold and silver etc. are found in igneous rocks.
 - ➡ Energy and diamond are found in metamorphic rocks. Coal, mineral oil and natural gas are found from sedimentary rocks.
27. Give lime stone producing places in Gujarat.
- ➡ In Gujarat, Jamnagar, Kachchh, Amreli and Kheda districts are major lime stone producing districts.

- ➡ The rocks in Jamnagar districts contain about 97 % lime content. It is used in making cement and soda-ash.
 - ➡ Other districts which also have lime stone reserves are Banaskantha, Mehsana, Sabarkantha, Vadodara, Panchmahal, Bharuch, Narmada, Surat, Bhavnagar and Rajkot.
28. Write a note on 'Natural gas'.
- ➡ Natural gas is associated with mineral oil. It is separated from it.
 - ➡ It is cheaper and considered to be a non-pollutant source of energy.
 - ➡ The reserves of natural gas in our country are found in Khambhat basin, Kaveri basin and Jaisalmer.
 - ➡ Ankleshwar of Gujarat is considered to be the largest natural gas reserve.
29. Write a note on solar energy.
- ➡ Sun is considered to be the main source of energy on the Earth. The biosphere on the Earth throbs due to solar energy.
 - ➡ Using solar energy technology, the appliances run on solar energy are increased in India.
 - ➡ Solar cooker is used for cooking, solar heater for heating the water and solar panels are used to generate electricity.
 - ➡ Gujarat state gets maximum solar energy in India. GEDA has established a solar cold storage near Chhani (Vadodara) with a capacity of 10 tones.
 - ➡ A solar energy plant has been installed at Madhopur near Bhuj in Gujarat for desalination of Saline ocean water.
 - ➡ Today solar panels are fixed to provide street lights in those villages without electricity, for irrigation to the farms and for television.
30. Write a note on wind energy.
- ➡ The Sun provides heat energy on the surface of the Earth. Winds are formed due to the high and low pressure pockets formed in the atmosphere.
 - ➡ Wind energy can be obtained through the wind mills at the sea coast and in open space.
 - ➡ Gujarat, Tamil Nadu, Maharashtra, Andhra Pradesh, Odisha, Karnataka, Madhya Pradesh and Kerala states in India produce wind energy.
 - ➡ In Gujarat wind farms are operated at Lambha village near Jamnagar.
 - ➡ Wind farms are operated at the wind mills found at the sea coast near Mandvi in Kachchh.
 - ➡ Wind mills founded at Devbhumi Dwarka, Jamnagar, Rajkot, Porbandar districts.
 - ➡ Thus, India has become fifth country in the world to produce electricity through wind.
31. Write a note on Bio-gas.
- ➡ Useless agriculture materials, molasses, other vegetation, dung and human excreta are used to produce bio-gas.
 - ➡ The methane gas is released after these material purely. It is an inflammable gas.
 - ➡ After usage of bio-gas precious fertilizer without virus is obtained.
 - ➡ Thus, energy and fertilizer both can be obtained.
 - ➡ Bio-gas is a non-conventional source of energy resource.

- ➡ Uttar Pradesh and Gujarat hold first and second place respectively in the bio-gas production.
 - ➡ The largest bio-gas plant has been installed at Maithan near Siddhpur which is run on collective basis.
 - ➡ Other bio-gas plants in operational stage are located at Rudratol of Daskroi taluka of Ahmedabad and at Dantiwada in Banaskantha district.
32. Write a note on Geothermal energy.
- ➡ The thermal energy from the interior of the Earth comes to the surface of the Earth in the form of geysers or hot springs. Due to heat, these are transformed into vapour. This vapour exerts upward pressure on the ground water which release energy. By using these energy, the geothermal energy is obtained.
 - ➡ Hot water springs in Gujarat are located at Lasundra, Tuva, Unai.
 - ➡ Besides hot water springs are also located at Tulsishyam in Saurashtra. Thus these hot water springs have the possibilities of getting geothermal energy.
33. Write a note on necessity of non-conventional energy equipments.
- ➡ Resources like coal or minerals oil are available in limited quantity. Attempts started to conserve them for a longer time.
 - ➡ Wind energy, solar energy, bio-gas, tidal energy and geothermal energy are included as alternate resources. These are all renewable and inexhaustible resources.
 - ➡ Many countries have taken step in this direction like U.S., Russia, France, Canada, Australia, Netherland and Japan are advancing in this field effectively.
 - ➡ In 1981, Commission for Additional Sources of Energy (CASE) was established in India.
 - ➡ Gujarat Energy Development Agency (GEDA) is working in this direction.
34. Write a note on importance of coal.
- ➡ In earlier times, vegetation ruled on the Earth. Due to tectonic movements this vegetation was buried in the interior. As a result the trees containing carbon contents and some animals underwent gradual combustion due to the internal heat and pressure. Due to this the vegetation was transformed into coal. The period before about 25 crore years was known as carboniferous period.
 - ➡ Usage of coal increased with the invention of steam engine. Means of transportation like railway and steamer are now easy to use with the invention of electricity, coal became an important mineral for producing electricity.
 - ➡ Some by products are available from coal, like coal-tar, ammonia gas, benzyl and crude oil.
 - ➡ Coal is available from stratified rocks on the basis of carbon, coal can be divided into four types.
 - (1) Anthracite coal
 - (2) Bituminous coal
 - (3) Lignite coal and
 - (4) Peat coal.
 - ➡ Major states producing coal in India are Jharkhand, Odisha, West Bengal, Chhatisgad, Madhya Pradesh and Jammu-Kashmir.
 - ➡ Moreover, Rajasthan, Tamil Nadu, Assam and Gujarat also produce coal.

- ➡ Coal fields of Gujarat are Kachchh, Bharuch, Mehsana, Bhavnagar and Surat. Lignite coal is available here.
35. Explain statements / reasons : Man's relation with minerals is very old and strong.
- ➡ The requirements of primitive man were limited.
- ➡ He worked only to sustain his life.
- ➡ Minerals have a large role in the human progress. Thus mineral is a natural resource.
- ➡ The human evolution process is divided into various ages. Such as stone age, bronze age, Iron age and Modern age. i.e. : Atomic age.
- ➡ Man used stones for hunting but, now he is travelling into space.
- ➡ Thus, man's relation with minerals is very old and strong.
36. Mention the utility of Copper.
- ➡ Copper is used since primitive times. This was the first mineral used by man. It is more important because of its mixing property.
- ➡ When copper is mixed with Zinc-Brass is formed.
- ➡ Copper is used mostly in the making of electric equipment.
- ➡ When copper is mixed with Tin bell metal is formed.
- ➡ It is used in telephone, radio, television, refrigerator and air conditioners. Thus, it is a good conductor of electricity.
- ➡ It is also used in insecticides, explosive, coloured glass, coins and in printing.
37. Write about the classification of minerals.
- ➡ (i) Metallic minerals (ii) Non-metallic minerals (iii) Minerals used for energy resources
- (i) Metallic Minerals :
- ➡ Precious metallic minerals are Gold, Silver and Platinum.
- ➡ Light metallic minerals are Magnesium, Bauxite and Titanium.
- ➡ Minerals used as an alloy are Chromium, Manganese, Tungsten and Vanadium.
- ➡ Iron, Copper, Lead, Zinc, Tin etc. minerals are used for common uses.
- (ii) Non-metallic Minerals :
- ➡ Lime stone, Chalk, Mica, Asbestos, Fluorspar, Gypsum and Sulphur, Diamond are there.
- (iii) Minerals used for energy resources :
- ➡ Energy used for mineral resources : Coal, Mineral Oil, Natural gas, Uranium and Thorium are considered as these type of minerals.
38. State the uses of Lime stone.
- ➡ Lime stone is used in large quantity in the production of cement.
- ➡ It is used for iron melting.
- ➡ It is used for chemical industry.
- ➡ It is used in soda-ash, soap, colour-chemicals, building construction.
- ➡ It is used in paper and in sugar refining.