

**SESSION : 2022-23**

**CLASS : X**

**MINERAL AND ENERGY RESOURCES**

**Q.1 How many percent *minerals* intake represents our total intake of nutrients –**  
(a) 0.3  
(b) 3.0  
(c) 0.5  
(d) 5.0  
**Q.2 Magnetite is the finest iron or with a new higher content iron- up to –**  
(a) 60%  
(b) 70%  
(c) 80%  
(d) 90%  
**Q.3 State which is the largest producer of manganese is –**  
(a) Karnataka  
(b) Jharkhand  
(c) Madhya Pradesh  
(d) Orissa  
**Q.4 Which is the oldest oil producing state in India:**  
(a) Gujarat  
(b) Maharashtra  
(c) Assam  
(d) None of these  
**Q.5 India now ranks as a super power in the world, that is:**  
(a) Wind Super Power  
(b) Solar Super Power  
(c) Hydel superpower  
(d) Tidal Super Power  
  
**Answer:**  
**1.(a) 2.(b) 3.(d) 4.(c) 5.(a)**

**A naturally occurring substance that has a definite chemical composition is a**

**mineral**

compound

metal

rock

**The following is (are) non-metallic mineral(s)**

Limestone

Mica

Gypsum

**All of the above**

**Minerals can be extracted by**

Mining

Drilling

Quarrying

**All of the above**

**Minerals that lie at shallow depths are taken out by removing the surface layer; this is known as**

**open-cast mining**

Shaft mining

Drilling

All of the above

**Non-metallic minerals are found in**

Igneous rocks

Metamorphic rocks

**Sedimentary rocks**

All of the above

**The largest producer of mica in the world is**

Australia

**India**

China

Canada

**Kolar in \_\_\_\_\_\_\_\_ has deposits of gold in India.**

Tamil Nadu

Kerala

Andhra Pradesh

**Karnataka**

**‘Bauxite’ is an ore of**

Iron

Copper

**Aluminium**

Mica

**The following is called ‘Black gold’.**

**Petroleum**

Coal

Bauxite

None of the above

**Bio-gas is primarily a mixture of**

**Methane and carbon dioxide**

Methane and Oxygen

Propane and carbon dioxide

Propane and oxygen

**Which one of the following is the softest mineral ?**

Magnetite  B. Limestone  C.Talc  D. Mica

**In which of the following the mineral  deposits  are called placer deposits ?**

 A.  Occurrence of copper in the cracks of igneous rocks

 B  Occurrence of gypsum  found in the arid regions

 C.Bauxite formed by the decomposition of surface rocks

 D..Occurrence of silver brought by river at the base of a hill

**Which one of the following is not a metallic mineral ?**

A. Sulphur,     B. Lead    C.  Bauxite   D.  Nickel

**Which one of the following is  a Ferrous mineral ?**

 A. Manganese B.  Copper     C.  Platinum      D.  Granite

**Which of the following mineral is found in Khetri mines ?**

A. Manganese   B.  Coal  C.  Copper  D. Iron

**Which is the leading producer of Copper  ?**

A.  Rajasthan  B. Jharkhand  C.  Madhya Pradesh  D. Karnataka

**Which one of the following is the iron ore mine of Karnataka ?**

 A. Bailadila  B. Durg  C. Mayur Bhanj   D. Kudremukh

**From which one of the following mine iron ore exported** **through Vishakhapatnam port**

A. Bailadila   B.  Kudremukh   C. Bellary  C. Badampahar

**Which one of the following is not an ore of iron?**

A . Bauxite    B.Hematite    C.  Magnetite     D. Iron pyrite

**Which of the following mineral is found in  Koderma, Gaya ,Nellore ?**

A.  Bauxite   B. Copper C. Limestone    D.  Mica

**Which one of the following state is the leading producer of Bauxite ?**

Rajasthan  B. Jharkhand  C.  Madhya Pradesh  D. Orissa

**Balaghat mine is an important mine of  -----------**

A. . Rajasthan  B. Jharkhand  C.  Madhya Pradesh  D. Orissa

**Kudremukh is an important   ------------------------- mine**

A. copper mine     B, Bauxite mine  C Iron- ore mine           D   Manganese mine

**Minerals found in the crevices of igneous or metamorphic rocks in small quantities are called as**

A.  Veins               B   lodes      C. placer deposits      D.   All of the above

**Which is the leading producer of manganese?**

A. Rajasthan  B. Jharkhand  C.  Madhya Pradesh  D. Orissa

**Khetri  is important for its  --------------------**

A.  Iron –ore mine     B. Lignite mine     C. Mica mine               D.  Copper mine

**Which one of the following mineral is an important raw material for the cement industry?**

A. Mica     B.  Bauxite      C. Manganese      D.  Limestone

**In Which of the following manufacturing manganese used?**

A.  Steel               B. Paints             C.   Insecticides          D. All of the above

**Where is Bailadila mine located?**

A. Madhya Pradesh   B. Chhattisgarh      C.   Jharkhand   D. Orissa

**Which one of the following is not a metallic mineral?**

A. Sulphur,     B. Lead    C.  Bauxite   D.  Nickel

**Question - Answers of Minerals and Energy Resources**

**Q.1 “Discovery and use of iron brought a radical change in human life” prove it with three examples.**  
Ans: Discovery and use of iron really brought a radical change in human life. The examples are as follows:  
a) Revolution in agriculture-different type of tools were invented like axe, hook, plough etc.  
b) Revolution in industry-different tools and machines like spinning.  
c) Revolution in transportation- bullock-cart, ships, boats etc were invented.  
  
**Q.2 Describe the various forms in which minerals occur.**  
Ans: Minerals occur in the following forms:  
a) In igneous and metamorphic rocks (cracks, crevice, faults or joints)  
b) In beds or layers of sedimentary rocks due to deposition, accumulation and concentration.  
c) Decomposition of surface rocks.  
d) Alluvial deposits in sands of valleys and the base of hills as “ Placer Deposits”  
  
**Q.3 Why is mining activity often called a “Killer Industry”. Give three reasons.**  
Ans: The three reasons are as follows:  
a) High risk is involved.  
b) Due to poisonous fumes, mines are vulnerable to workers for pulmonary diseases.  
c) Risk of collapsing mines roofs, and fires in coal mines.  
d) Water sources get contaminated  
  
**Q.4 Give three reasons in the favour of use of ‘Atomic energy’.**  
Ans: The three reasons in the favour of use of 'Atomic energy' are as follows:  
a) Coal and natural oil are exhaustible.  
b) Nuclear power plants are easy to handle.  
c) Most developed countries are utilising this energy successfully.  
d) It can be useful in fields of medicines and agriculture.  
e) Hydel energy is not satisfactory due to environmental issues.  
  
**Q.5 Why does solar energy in Rajasthan have greater potential as non–conventional source of energy?**  
Ans: The solar energy in Rajasthan have greater potential as non-conventional source of energy because it has:  
a) Hot and dry region  
b) Clear sky almost whole year  
c) Cheaper installation  
d) Renewable and pollution free energy source.  
e) Government motivation

**LONG ANSWER TYPE QUESTIONS**

**Q.1 What are the Petroleum producing areas in India. Explain.**  
Ans . Most of the petroleum producing areas in India are associated with anticlines and fault traps in the rock formations of the tertiary age. In the region folding, anticlines or domes, it occurs where oil is trapped in the crest of the uphold. Petroleum is also found in fault traps between porous rocks. Major petroleum producing area of India are …  
1) ASSAM- Digboi, Naharkatia, Moran-Hugrijan, Namdang region  
2) GUJRAT- Ankeleshwar, Lunez, Navgan  
3) MUMBAI HIGH  
4) Godavari – Mahanadi basin  
  
**Q2: Distinguish between Natural Gas and Bio Gas?**  
Ans: **NATURAL GAS**  
• It is a mixture of combustible gaseous hydrocarbons occurring in the rocks of earth crust.  
• This is commercial energy.  
• It is used as raw material in the petrochemicals.  
• It is transported from one place to another through pipeline.  
• Mostly used in urban areas.  
  
**BIO GAS**  
• It is derived by decomposition of waste of animals and plants with the help of microorganism in presence of water.  
• Non commercial energy  
• It is produced in tanks  
• It is found in rural areas  
  
**Q.3 What are Non - Conventional sources of energy? Discuss two sources of such types of energy.**  
Ans: Sources of energy which are renewable, eco-friendly and newer one are called non conventional sources of energy i.e. wind energy, geothermal energy, tidal energy etc.  
**GEOTHERMAL ENERGY:** Geothermal energy refers to the heat and electricity produced by using the heat from the interior of the earth. Where the geothermal gradient is high , high temperature is found at shallow depth . There are several hot springs in India which could be used to generate electricity. Two projects, one is MANIKARAN in Himachal and second in PUGA VALLEY in Ladakh have been set up in India to harness Geothermal energy.  
**TIDAL ENERGY:** Oceanic tides can be used to generate electricity .During high tides water flows into the inlet and get trapped when it is closed. After the fall of tide the water flows back to the sea via pipe lines that carry it through power generating turbines. In India gulf of Kutch provides ideal conditions for tidal energy.  
  
**Q.4 India now ranks as a “WIND SUPER POWER" in the world. Why?**  
Ans: The reasons are:  
• India gets advantage of trade winds, westerlies and monsoon winds.  
• Wind energy is completely pollution free and non exhaustible that’s why it becomes popular.  
• India has an ambitious program to install 250 wind driven turbines with total capacity of 45 mega watts spread over 12 suitable locations.  
• India’s potential wind power generation is of 50000 megawatts of which ¼ can be easily harnessed.  
• Rajasthan, Gujarat, Maharashtra, Karnataka and Tamil Nadu have favourable conditions for wind energy. Wind power plant at LAMBA in Gujarat, is the largest in Asia.  
  
**Q.5 How can we conserve energy resources in India? Explain.**  
Ans : Following efforts can be made to conserve energy resources in India:  
i) Using public transport instead of individual vehicles.  
ii) Switching off electricity when not in use.  
iii) Using power saving devices.  
iv) More and more use of non conventional source of energy as they are renewable and eco-friendly.  
v) In automobiles electrical motors should be introduced.  
vi) Intensified exploration and research of new sources of energy.  
 **Q.6 What are minerals? How are they classified?**  
Ans. Minerals are natural resources which are obtained from rocks. Geologists define a mineral as a “homogeneous, naturally occurring substance with a definable internal structure”. They are normally found in solid, liquid and gaseous states. They have a definite chemical composition and crystalline structure.  
A particular mineral that will be formed from a single or certain combination of elements depends upon the physical and chemical conditions under which the material forms. Minerals are classified into metallic and non-metallic minerals and energy resources.  
  
**Q.7 How are minerals formed in ingeous and metamorphic rocks?**  
Ans. In igneous and metamorphic rocks minerals may occur in the cracks, crevices, faults or joints. The smaller occurances are called veins and the larger are called the lodes. In most cases, they are formed when minerals in liquid/molten and gaseous forms are forced upward through cavities towards the earth's surface. they cool and solidify as they rise.  
  
**Q.8 Why do we need to conserve mineral resources?**  
Ans. The total volume of workable mineral deposits is an insignificant fraction i.e. one percent of the earth's crust. We are rapidly consuming mineral resources that required million of years to be created and concentrated. 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.  
Mineral resources are therefore, finite and non-renewable. Rich mineral deposits are our country's extremely valuable but short lived possessions. Continued extraction of ores leads to increasing costs as mineral extraction comes from greater depths along with decrease in quality.  
  
**Q.9 Describe the distribution of coal in India.**  
Ans. The major resources of metallurgical coal belong to the Gondwana age and are located mainly in the north eastern part of the peninsula. Rich reserves of coal are found in the Damodar Valley region in the states of West Bengal and Jharkhand. Raniganj in West Bengal and Jharia and Bokaro in Jharkhand are important coalfields. One third of the total production comes from here.  
Coal is also found in the Godavari, Mahanadi, Son and Wardha valleys. Korba in Chhattisgarh, Singrauli and Penah-kanhan valley in Madhya Pradesh, Talcher in Orissa, Kamptee and Chandrapur in Maharashtra and Singareni of Andhra Pradesh are important coal mines. Tertiary coal occur in the north eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland. Principal lignite reserves are found in Neyveli in Tamil Nadu.  
  
**Q.10 Why do you think that Solar energy has a bright future in India?**  
Ans: The western parts of India, especially the Thar desert's region, receive undisturbed sunshine for most parts of the year. This area has great potential for development of energy and can be utilised as the largest solar power house of India.  
Solar energy is becoming fast popular in different parts of the country, especially in rural and remote areas. It can be used for cooking, heating of water, pumping, refrigeration, street lighting and room heating in cold areas. The largest solar plant of India is located at Madhapur near Bhuj in Gujarat. The solar energy is used to sterilise milk cans.