Ravi Maths Tuition

GEO - Minerals and Energy Resources

10th Standard

Social Science

Multiple Choice Question 68 x 1 = 68

1) Which one of the following minerals is formed by decomposition of rocks, leaving a residual mass of weathered material?

(a) coal (b) bauxite (c) gold (d) zinc

2) Koderma, in Jharkhand is the leading producer of which one of the following minerals?

(a) bauxite (b) mica (c) iron ore (d) copper

3) Minerals are deposited and accumulated in the stratas of which of the following rocks?

(a) sedimentary rocks (b) metamorphic rocks (c) igneous rocks (d) none of the above

4) Which one of the following minerals is contained in the Monazite sand?

(a) oil (b) uranium (c) thorium (d) coal

5) Which out of the following minerals is formed as a result of evaporation in the arid regions?

(a) Gypsum (b) Zinc (c) Coal (d) Copper

6) Which out of the following minerals is formed by the decomposition of surface rocks, and leaves a residual mass of weathered material?

(a) Gold (b) Bauxite (c) Zinc (d) Coal

7) Which out of the following minerals occur in the sands of valley floors and the base of hills?

(a) Gold (b) Copper (c) Sulphur (d) Marble

8) What is 'Rat hole' mining?

(a) Mining in places where there are lots of rats

(b) Mining done by family members in the form of a long narrow tunnel (c) Mining that kills rats

(d) None of these

9) Name the mines in Karnataka which is a 100per cent export unit?

(a) Balaghat mines (b) Khetri mines (c) Kudermukh mines (d) None of these

10) Which state in India is the largest producer of manganese ores?

(a) Jharkhand (b) Madhya Pradesh (c) Maharashtra (d) Odisha

11) India is critically deficient in the reserve and production of

(a) Copper (b) bauxite (c) zinc (d) platinum

12) Which state in India is the largest producer of bauxite?

(a) Odisha (b) Karnataka (c) Maharashtra (d) Kerala

13) The Koderma-Gaya-Hazaribagh belt of Jharkhand is a leading producer of

(a) copper (b) Manganese (c) iron ore (d) mica

14) Which out of the following is a non-conventional source of energy?

(a) Atomic energy (b) Firewood (c) Coal (d) Natural gas

15) What is low grade brown coal called?

(a) Bituminous (b) Anthracite (c) Lignite (d) None of these

16) About 63per cent of India's petroleum production is form

(a) Assam (b) Mumbai High (c) Gujarat (d) None of these

17) Which is India's oldest oil producing state?

(a) Jharkhand (b) Arunachal Pradesh (c) Karnataka (d) Assam

18) What has raised uncertainties about the security of energy supply in the future?

(a) Rising prices of oil and gas (b) Lack of water resources

(c) Limited use of non-renewable fossil fuels (d) Increasing use of renewable energy resources

19) Which mineral is used for generating atomic or nuclear power?

(a) Coal (b) Bauxite (c) Uranium (d) Copper

20) The Monazite sands of Kerala are rich in

(a) Coal (b) Uranium (c) Thorium (d) Platinum

21) Where is the largest solar plant of India located?

(a) Gujarat (b) Rajasthan (c) Maharashtra (d) Odisha

22) Nagarcoil and Jaisalmer are well-known for the effective use of

(a) tidal energy (b) geothermal energy (c) wind energy (d) biogas

23) Biogas plants using cattle dung are called

(a) hydel plants (b) gobar gas plants (c) thermal power station (d) gas station

24) Which place in India is ideal for utilising tidal energy?

(a) Gulf of Kachchh (b) Gulf of Khambhat (c) Gulf of Mannar (d) None of these

25) What are the Khetri mines famous for?

(a) Coal (b) Copper (c) Iron (d) Gold

26) Which out of the following is derived from the ocean waters?

(a) Limestone (b) Sandstone (c) Cobalt (d) Bromine

27) Magnetite is the finest iron or with a new higher content iron upto

(a) 60% (b) 70% (c) 80% (d) 90%

28) How many percent minerals intake represents in our total intake of nutrients?

(a) 0.3 (b) 3.0 (c) 0.5 (d) 5.0

29) Which is the oldest oil producing state in India

(a) Gujarat (b) Maharashtra (c) Assam (d) None of these

30) 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

31) Limestone is associated with

(a) Sedimentary rock (b) Igneous rock (c) Metamorphic rock (d) Tertiary rock

32) Which is correct about Magnetite iron core?

(a) Magnetite is the most important industrial iron ore in terms of quantity used

(b) Magnetite has the inferior magnetic qualities which is not valuable in the electric industry

(c) It is the finest iron ore with very high content of iron upto 70%.

(d) It has a slightly lower iron content than hematite (50-60%)

33) They study minerals as part of earth's crust for a better understanding of landforms. They are called:

(a) Scientists (b) Geographers (c) Geologists (d) Ecologists

34) Which one of the following is an essential feature of Mica?

(a) It is a metallic mineral made up of a series of plates

(b) It is not used in electric and electronic industry (c) It cannot be easily split into thin sheets

(d) It can be clear, black, green, red, yellow or brown

35) Small occurrences of minerals in rocks are known as

(a) Lodes (b) Veins (c) Orcs (d) Crevices

36) Which mineral belongs to the category of non-ferrous metals?

(a) Iron core (b) Manganese (c) Cobalt (d) Copper

37) Which one of the following minerals is NOT obtained from the veins and lodes?

(a) Tin (b) Zinc (c) Lead (d) Gypsum

38) The larger occurrences of minerals of igneous and metamorphic rocks are called:

(a) Veins (b) Lodes (c) Beds (d) Layers

39) Rat-hole mining is found in

(a) Jharkhand (b) Orissa (c) Madhya Pradesh (d) Meghalaya

40) Which one of the following minerals is largely derived from Ocean Waters?

(a) Bromine (b) Silver (c) Platinum (d) Bauxite

41) The Koderma-Gaya-Hazaribagh belt of Jharkhand is the leading producer of which one of the following minerals?

(a) Bauxite (b) Iron ore (c) Copper (d) Mica

42) Which one of the following minerals is a fossil fuel?

(a) Coal (b) Zircon (c) Uranium (d) Barium

43) Odisha is the leading producer of which ore of the following minerals?

(a) Copper (b) Mica (c) Manganese ore (d) Iron ore

44) Which of the following is a non-metallic mineral?

(a) Lead (b) Tin (c) Limestone (d) Copper

45) Which of the following is the finest quality of iron ore?

(a) Magnetite (b) Limonite (c) Siderite (d) Haematite

46) Which of the following statements is not true about the ferrous minerals?

(a) Iron ore is a ferrous mineral

(b) Ferrous minerals account for about three fourths of the total value of the production of the metallic minerals

(c) Ferrous minerals provide a strong base for the development of metallurgical industries

(d) India does not produce ferrous minerals in large quantities

47) Which of the following is a non-ferrous mineral?

(a) Manganese (b) Petroleum (c) Aluminium (d) Iron

48) Which one of the following fuels is considered as environment-friendly?

(a) Natural gas (b) Petroleum (c) Coal (d) Firewood

49) Which of the following minerals is obtained through veins and lodes?

(a) Coal (b) Bauxite (c) Tin (d) Lead

50) Which one of the following states has the largest wind farm cluster?

(a) Gujarat (b) Rajasthan (c) Tamil Nadu (d) Himachal Pradesh

51) About 63 per cent of India's petroleum production is from

(a) Assam (b) Mumbai High (c) Gujarat (d) None of these

52) Which of the following is the basic mineral and the backbone of industrial development?

(a) Zinc ore (b) Iron ore (c) Manganese ore (d) Silver ore

53) Which is the finest iron ore with a very high content of iron?

(a) Magnetite (b) Haematite (c) Lignite (d) None of these

54) The Badampahar mine in Mayurbhanj and Kendujhar district is situated in which of the following Indian state?

(a) Kamataka (b) Odisha (c) Chhattisgarh (d) Jharkhand

55) Iron ore is exported to Japan and South Korea via which port?

(a) Chennai (b) Vishakhapatnam (c) Haldia (d) Mangaluru

56) Which of the following minerals is obtained from ocean waters?

(a) Common Salt (b) Bromine (c) Magnesium (d) All of these

57) Large reserves of natural gas have been discovered in which place in India?

(a) Arabian Sea (b) Andaman and Nicobar Islands (c) Krishna Godavari Basin (d) Gulf of Mannar

58) Which type of sand in Kerala is rich in thorium?

(a) Monazite sands (b) Gypsum sands (c) Silica sands (d) Black sands

59) In India, the Gulf of Khambhat, the Gulf of Kachchh and the Gangetic delta provide ideal condition for utilising which energy?

(a) Tidal energy (b) Wind energy (c) Solar energy (d) Non-conventional energy

60) Which of the following is true for geothermal energy?

(a) Experimental projects are set up in Puga valley, Ladakh

(b) Aravalli ranges of Rajasthan have small reserves of it.

(c) It develops in regions where there is low temperature

(d) They are good sources for exhaustible conventional fuels.

61) Choose the correct option.

(a) Chandrapur thermal power plant - Odisha (b) Mayurbhanj iron ore mines - Amarkantak

(c) Kalol oil fields - Gujarat (d) Bauxite - Jharkhand

62) Consider the following statement about Bauxite.

1. From bauxite, a clay like substance alumina is extracted.

II. Jharkhand is largest bauxite producer of India.

III. Bellari-Chitradurga belt is famous for bauxite reserves in India.

Which of the following is true

(a) Only I (b) II and III (c) I and III (d) All of these

63) Arrange the following manganese producing states from highest to lowest production.

1. Odisha
2. Madhya Pradesh
3. Karnataka
4. Andhra Pradesh

(a) 2, 1,3,4 (b) 1,2,3,4 (c) 3, 2, 1,4 (d) 2, 3, 4, 1

64)

List I	**List II**
A. Ferrous minerals	1. Potash
B. Non-ferrous minerals	2. Uranium
C. Non-metallic minerals	3. Nickel
D. Energy minerals	4. Bauxite

(a)

A	B	C	D
3	4	1	2

(b)

A	B	C	D
1	3	2	4

(c)

A	B	C	D
1	2	3	4

(d)

A	B	C	D
1	4	3	2

65) Sangita and her husband belongs to mizo-tribe in the North-East region of India. They live in an area that is rich in mineral resources. They both are involved in rat-hole mining along with other individuals of the community.

Accordingly, which of the following steps would be most crucial in this situation?

(a) Government should immediately stop them from rat hole mining as it is declared illegal by national green tribunal.

(b) Government should make some provisions to make rat hole mining easy for them.

(c) Government should give monetary help to the people belonging to this community to prevent them from this practice.

(d) Government should give them awareness about the other methods of mining.

66) Non-conventional sources of energy are renewable form of energy that is continuously produced in nature and is limitless.

Which of the following examples represents the non-conventional sources of energy?

(a) Production of thermal energy (b) Use of natural gas (c) A biogas plant set up at municipal level (d) A petroleum station

67) Choose the correct option.

(a) Chandrapur thermal power plant - Odisha (b) Mayurbhanj iron ore mines - Amarkantak

(c) Kalol oil fields - Gujarat (d) Bauxite producer - Jharkhand

68) Match Column-I with Column-II and choose the correct option.

	Column I (Minerals)		**Column II (Examples)**
A.	Ferrous	1.	Coal
B.	Non-ferrous	2.	Granite
C.	Non-metallic	3.	Bauxite
D.	Energy	4.	Cobalt

(a)

A	B	C	D
2	4	3	1

(b)

A	B	C	D
4	3	2	1

(c)

A	B	C	D
1	2	4	3

(d)

A	B	C	D
3	4	2	1

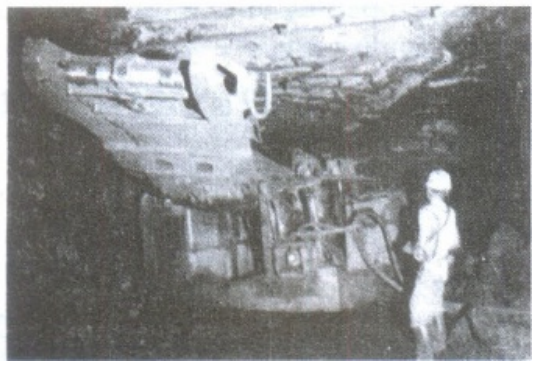
Fill up / 1 Marks 2 x 1 = 2

69) ____ is used in manufacturing of electrical cables and in electronics and chemical industries.

70) Durg-Bastar-Chandrapur belt lies in Chhattisgarh and____

Picture Based Questions 2 x 1 = 2

71) What work do the following picture show?



(a) Construction work in progress
(b) Mining
(c) Trapping of nuclear energy
(d) Conservation of minerals

72) The given picture shows the development of which source of energy?

(a) Biogas
(b) Geo thermal energy
(c) Solar energy
(d) Nuclear energy

Correct and rewrite 3 x 1 = 3

73) Iron ore is a clay-like substance from which alumina is extracted and later alumina developed into aluminium.

74) Chhattisgarh is the largest bauxite producing state in India.

75) High grade hematite are is found in Kendujhar district of Chhattisgarh and in Chandrapur belt of Odisha.

Assertion and reason 1 x 1 = 1

76) **Assertion (A)** Flood gate dams are built across rivers so that water flows into inlet and gets trapped during high tides.
Reason (R) Trapped water flows back via a pipe that carries it through a power generating turbine.
Codes
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

2 Marks 87 x 2 = 174

77) Give three examples of metallic and three examples of non-metallic minerals?

78) Name four Important iron ore-producing states of India?

79) Name four manganese ore producing states of India.

80) Name four bauxite producing states.

81) Name three states which are known for the production of mica.

82) What are commercial sources of energy?

83) What are conventional source of energy?

84) Name six non-commercial source of energy.

85) Name three most important coal producing states of India.

86) Mention three areas where petroleum is found in India?

87) What is Anthracite?

88) List four non-conventional energy resources.

89) Suggest two ways of conserving minerals.

90) Name two non-metallic minerals.

91) Why are there a wide range of colours, harness, crystal forms lustre and density found in minerals?

92) How do minerals occur in igneous and metamorphic rocks?

93) How do minerals occur in sedimentary rocks?

94) Which rock consists of a single minerals only?

95) Name the state where the largest wind farm cluster is located.

96) Which minerals is formed by decomposition of rocks, leaving a residual mass of weathered material?

97) In which State are the 'Balaghat' Copper mines located?

98) Name one fossil fuel which is considered environment friendly.

99) Name the finest quality of iron ore.

100) Odisha is the leading producer of which mineral?

101) In which non-conventional source of energy is India referred to as a super power?

102) Which is the most abundantly available fossil fuel India? Name its four major forms

103) How do minerals occur in sedimentary rocks?

104) How are 'Gobar gas plants' beneficial to the farmers?

105) Why has aluminium metal great importance?

106) What are minerals?

107) Study about which of the characteristics of minerals is not a concern of geographers.

108) In the horizontal strata of which rocks are the minerals deposited and accumulated?

109) State the type of minerals.

110) Name the types of metallic minerals

111) Which mineral is largely derived from the ocean water?

112) What are ores?

113) Which region of India is almost devoid of economic minerals?

114) What are placer deposits?

115) What is a mine?

116) Name the finest quality or iron ore with magnetic qualities.

117) Name the iron ore belt where Kudremukh mines are located

118) Mention any two uses of Manganese Ore.

119) Name the largest manganese producing state of India.

120) In which state are the Bailadila mines located?

121) Which type of iron ore is mostly used by industries?

122) Besides steel, name two other industries which use large amounts of manganese.

123) In which minerals is India's reserves and production not very satisfactory?

124) In which mineral reserve in India critically deficient?

125) In which state of India are the Balaghat copper mines situated?

126) In which state of India are the Khetri Copper mines situated?

127) Mention any three qualities found in aluminium, which have made it a very popular metal.

128) What are the main features of Mica which makes it indispensable?

129) For which mineral is Koderma in Jharkhand, a leading producer?

130) Name the belt which is a leading producer of Mica?

131) Which type of coal is most popular for commercial use?

132) Coal of which geological age is found in north-eastern India?

133) Name the highest quality of hard coal

134) Which is the oldest oil producing state in India?

135) Name any two important oilfields in Assam

136) Where was petroleum first drilled in India?

137) Name one environment friendly fuel

138) Which industries are the key users of natural gas?

139) Per capita consumption of which energy is considered as an index of development?

140) Name the type of electricity generated by burning fossil fuels.

141) Which mineral is found in the Monazite sands?

142) In which state is the largest wind farm cluster located?

143) What do you mean by Geothermal Energy?

144) Which non-conventional source of energy is harnessed in the Parvati Valley near Manikaran in Himachal Pradesh?

145) Give two examples of non-metallic minerals.

146) Which mineral is indispensable for electric and electronic industries?

147) Name the type of coal mining carried on in Meghalaya.

148) Where is an experimental geothermal energy project located in India?

149) What is the general interest of geologists towards minerals?

150) Veins and lodes are found in which kind of rocks? Also, name some minerals found in them.

151) Name the regions containing the highest and the lowest amounts of mineral deposits in India

152) How bauxite is formed in rocks?

153) Give a list of minerals found in placer deposits

154) Which mineral is found in Kudremukh mines?

155) Wind energy received in abundance in Western Rajasthan and Gujarat has not been so far utilised and developed to the maximum. It falls in which category of resources?

156) Why mica is used in electrical and electronics industry?

157) Which place in India is well-known for effective use of wind energy?

158) Which is the most popular coal for commercial use.

159) How is nuclear energy obtained?

160) Which type of minerals are mainly obtained from veins and lodes?

161) Give an example of non-metallic mineral.

162) Tanu performed a web search to about the petroleum reserves in India. She found that there are few reserves of petroleum in India which are mostly located along the coast in Mumbai High and Gujarat or in North-East in Assam.
Mention the reasons behind location of petroleum reserves in the above areas

163) 'We need to expand our nuclear energy and then we can have round-the-clock green energy. Then we will reduce coal (based power).
Source: The Indian Express
Why It is desirable to expand our nuclear energy?

Activity Based Questions 9 x 2 = 18

164) What is the difference between an open pit mine, a quarry and an underground mine with shafts?

165) Superimpose the maps showing distribution of iron ore, manganese, coal and iron and steel industry. Do you see any correlation? Why?

166) Study the maps to explain why Chota Nagpur is a storehouse of minerals.

167) Have you ever wondered about the efforts the miners make in making life comfortable for you? What are the impacts of mining on the health of the miners and the environment?

168) Make a list of items where substitutes are being used instead of minerals. Where are these substitutes obtained from?

169) Name some river valley projects and write the names of the dams built on these rivers.

170) Collect information about cross country natural gas pipelines laid by GAIL (India) under “One Nation One Grid”.

171) Collect information about newly established solar power plants in India.

172) Find out where these minerals (silica, limestone, aluminium oxide, fluorite, rutile, ilmenite, anatase, mica, petroleum) are found.

3 Marks 96 x 3 = 288

173) Distinguish between the following in not more than 30 words.
(a)Ferrous and non-ferrous minerals
(b)Conventional and non-conventional sources of energy.

174) What is a mineral?

175) How are minerals formed in igneous and metamorphic rocks?

176) Why do we need to conserve mineral resources?

177) Why mining activity is often called a "Killer Industry". Give three reasons.

178) Why does solar energy in Rajasthan have greater potential as non-conventional source of energy?

179) How can solar energy solve the energy problem to some extent in India? Give your opinion

180) Distinguish between commercial and non-commercial energy.

181) Distinguish between anthracite and bituminous coal.

182) How is the mining activity injurious to the health of the miners and environment? Explain

183) In the present day energy crisis which steps will you take saving energy?

184) Why is energy needed?

185) Why is energy required for all activities? How can energy be generated? Explain.

186) Differentiate ferrous and non-ferrous minerals with examples.

187) Mention any three characteristics of ferrous group of minerals found in India.

188) Differentiate between conventional and non-conventional source of energy with example

189) Mention any three major iron-ore belts of India. Write any three characteristics of the southernmost iron-belt.

190) What is the use of manganese? Name the largest manganese-ore producing state of India.

191) Classify energy resource into two categories. Give two examples of each.

192) Why is there a pressing needs to use conventional sources of energy in India? Explain any three reasons.

193) "Minerals are an indispensable part of our lives". Support this statement with suitable examples.

194) Make a distinction between hydroelectricity and thermal electricity starting three points all are of distinction. What values are associated with using hydroelectricity?

195) Make a distinction between hydroelectricity and thermal electricity stating three points of distinction.

196) Explain the use of the petroleum as an energy resource and as an industrial raw material.

197) Explain any three steps to be taken to conserve the energy resources.

198) Why is conservation of minerals resources essential? Explain any two method of conserving mineral resources.

199) Suggest some measures to conserve the minerals resources.

200) What is the use of manganese? Name the largest manganese-ore producing state of India.

201) Classify energy resource into two categories. Give two examples of each.

202) Why is there a pressing needs to use conventional sources of energy in India? Explain any three reasons.

203) "Minerals are an indispensable part of our lives". Support this statement with suitable examples.

204) Make a distinction between hydroelectricity and thermal electricity starting three points all are of distinction. What values are associated with using hydroelectricity?

205) What are the two main ways of generating electricity? How are they different from each other.Explain.

206) Explain the use of the petroleum as an energy resource and as an industrial raw material.

207) Explain any three steps to be taken to conserve the energy resources.

208) Why is conservation of minerals resources essential? Explain any two method of conserving mineral resources.

209) Suggest some measures to conserve the minerals resources.

210) Which is the most abundantly available fossil fuel in India?

211) "Consumption of energy in all form has been rising all over the country. There is an urgent need to develop a sustainable path of energy development and energy and energy saving". Suggest and explain any three measure to solve this problem.

212) What is the utility of manganese? Describe its distribution.

213) What are the uses of copper? Name any two leading copper producing state in India.

214) What are the major properties of mica? Mention any three.

215) What are minerals? How are they classified?

216) Mention any three impacts of mining on the health of the miners.

217) Explain any three types of formations in which minerals occur.

218) Mention any three factors which play a very important role in turning a mineral reserve into a mine.

219) How is hydroelectricity generated? What advantages does it have over thermal electricity?

220) Explain three factors that make mineral extraction commercially viable.

221) Account for the absence of minerals in the Northern plains.

222) Which types of minerals have provided a strong base for the development of metallurgical industries in India? Which particular mineral is termed as the backbone of industrial development and why?

223) Explain two effects on our economy due to the export of good quality ores in large quantities

224) Mention the uses of manganese ore.

225) Mention the areas where manganese is found

226) How is mica one of the most indispensable minerals? Explain any three points.

227) Mention the names of the main mica-producing areas of India

228) What are the uses of limestone? Mention any two states which are the major producers of limestone.

229) "Energy saved is energy produced". Justify the statement by giving any six measures to conserve the energy resources.

230) How is coal formed? Describe the qualities of the four different types of coal found in India

231) "India is highly dependent on coal for meeting its commercial energy requirement". Support the statement with three arguments.

232) State the facts about the coal found in India with reference to the following:
(a) Name its four varieties
(b) Name the geological ages in which it is found in India
(c) Mention its two main uses

233) Identify the most abundantly available fossil in India. Explain any two types with its characteristics.

234) Explain the use of petroleum as an energy resources and as an industrial raw material.

235) Which is the other major source of energy after coal in India? Mention any four reasons why it is important.

236) Which factors make the production of solar energy convenient in India? What are its uses? Name the largest solar plant of India.

237) How can solar energy solve the energy problem to some extent in India? Give your opinion.

238) "Solar energy is expected to play an important role in India". Give three arguments in support of the statement.

239) "There is a pressing need to use renewable energy resources". Justify the statement with suitable arguments.

240) Explain any three methods of conservation of mineral resources in India.

241) How is nuclear energy obtained? What is it used for?

242) What are ores? Give example. What are 'placer deposits'? Give examples of minerals found in such deposits.

243) "Mineral resources in India are unevenly distributed." Support the statement with three suitable examples.

244) what are the uses of copper? Name the two leading copper producing states in India

245) Explain three phases by which treatment of industrial effluents can be done.

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

247) What are minerals? Give two examples. Also name any two carrier rocks of minerals.

248) Which state is the largest producer of manganese in India? Mention any four uses of manganese.

249) How is Durg-Bastar-Chandrapur belt important for India?

250) Name the non-metallic mineral which can split easily into thin sheets. Mention its uses.

251) Explain the formation of Bauxite and name the metal obtained from it

252) India is fairly rich in mineral resources, however its distribution is uneven. Comment.

253) What is the importance of energy resources? Give two examples each of conventional and non-conventional sources of energy.

254) State the importance of petroleum as an energy resource. Mention any four oil fields of India

255) Crude oil reserves are limited all over the world. If people continue to extract it at the present rate, the reserves would last only 35-40 years more. Explain any three ways to solve this problem.

256) What is natural gas? What is its advantage? Name one region of India where its reserves are found.

257) Mention any three factors that determine the economic viability of a reserve.

258) "Energy is an indispensable requirement in our modern lives." Explain the statement with three examples.

259) How naturally occurring gas is different from biogas?

260) What is tidal energy? Which regions in India provide ideal conditions for utilising tidal energy?

261) What is geothermal energy? Which regions in India show potential of developing this energy

262) Why India has the potential to develop wind energy? Which places in India are sources of Wind energy?

263) Read the following sources and answer the questions that follow.

Source A Biogas Shrubs, farm waste, animal and human waste are used to produce biogas for domestic consumption in rural areas. Decomposition of organic matter yields gas, which has higher thermal efficiency in comparison to kerosene, dung cake and charcoal.

(i) To what extent do you think biogas is better than dung cake for fuel?

Source B 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.

(ii) Why solar energy has more potential to be developed as major fuel in rural areas?

Source C Wind Energy India has great potential of wind power. The largest wind farm cluster is located in Tamil Nadu from Nagarcoil to Madurai. Apart from these, Andhra Pradesh, Karnataka, Gujarat, Kerala, Maharashtra and Lakshadweep have important wind farms.

(iii) What similarity or trait can be seen in the places idealy suited for setting up wind farm?

264) Which is the largest producer of manganese in India? Mention two uses of manganese.

265) "Natural gas is an important source of energy." Support the statement.

266) Discuss the factors that most likely determine the economic viability of a reserve.

267) Mr. Y, a renewable energy expert visits a village where two group of people were discussing and debating about development of energy resources in the country. One group was in favour of Hydroelectricity while the other one was with thermal electricity. How can Mr. Y solve this confusion?

268) 'The total volume of workable mineral deposits is an insignificant fraction i.e. one per cent of the Earth's crust. We are rapidly consuming mineral resources that required million of years to be created and concentrated.'
(i) What does the above statement means to say about the creation of mineral resources?
(ii) What needs to be done in order to solve the problem indicated in the above statement?

Case Study Questions 3 x 4 = 12

269) The growing consumption of energy has resulted in the country becoming increasingly dependent on fossil fuels such as coal, oil, and gas. Rising prices of oil and gas and their potential shortages have raised uncertainties about the security of energy supply in future, which in turn has serious repercussions on the growth of the national economy. Moreover, increasing use of fossil fuels also causes serious environmental problems. Hence, there is a pressing need to use renewable energy sources like solar energy, wind, tide, biomass and energy from waste material. These are called nonconventional 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.

1. What are non-conventional energy sources?
(a) Sources like wind, petroleum, oil, gas and coal are non-conventional sources of energy.
(b) Sources like wind, solar energy, tide, and biomass are non-conventional sources of energy.
(c) Sources like wind, thermal, hydro and petroleum are non-conventional sources of energy.
(d) Sources like solar energy, petroleum, natural gas and coal are non-conventional sources of energy.

2. What is causing serious environmental problems?
(a) Increasing use of fossil fuels are causing serious environmental problems.
(b) Increasing use of natural fuels are causing serious environmental problems.
(c) Decreasing use of fossil fuels are causing serious environmental problems.
(d) Increasing use of chemical fuels are causing serious environmental problems.

3. Why there is a pressing need to use renewable energy?
(a) There is a pressing need to use renewable energy due to serious malnutrition problems.
(b) There is a pressing need to use renewable energy due to serious agro-processing problems.
(c) There is a pressing need to use renewable energy due to serious fertilization problems.
(d) There is a pressing need to use renewable energy due to serious environmental problems.

4. Which of the following are examples of fossil fuels?
(a) Wind, coal, and gas are fossil fuels.
(b) Wind, tide and sun are fossil fuels.
(c) Coal, oil and gas are fossil fuels.
(d) Light, wind, and oil are fossil fuels.

270) Toothpaste cleans your teeth. Abrasive minerals like silica, limestone, aluminium oxide and various phosphate minerals do the cleaning. Fluoride which is used to reduce cavities, comes from a mineral fluorite. Most toothpaste are made white with titanium oxide, which comes from minerals called rutile, ilmenite and anatase. The sparkle in some toothpastes comes from mica. The toothbrush and tube containing the paste are made of plastics from petroleum. Find out where these minerals are found?

1. How are toothpastes made white and where does it come from?

(a) Most toothpaste are made white with potassium oxide, which comes from minerals called rutile, ilmenite and anatase.

(b) Most toothpaste are made white with copernicium oxide, which comes from minerals called rutile, ilmenite and anatase.

(c) Most toothpaste are made white with titanium oxide, which comes from minerals called rutile, ilmenite and anatase.

(d) Most toothpaste are made white with zinc oxide, which comes from minerals called rutile, ilmenite and anatase.

2. What is used to reduce cavities and where does it come from?

(a) Fluorite is used to reduce cavities and it comes from mineral fluoride.

(b) Calcium is used to reduce cavities and it comes from mineral calcium.

(c) Fluoride is used to reduce cavities and it comes from mineral fluorite.

(d) Rutile is used to reduce cavities and it comes from mineral zinc.

3. What are toothbrush and tube made up of?

(a) The toothbrush and tube containing the paste are made of plastics from natural gas.

(b) The toothbrush and tube containing the paste are made of plastics from petroleum.

(c) The toothbrush and tube containing the paste are made of plastics from plastic.

(d) The toothbrush and tube containing the paste are made of plastics from potassium.

4. What cleans our teeth and by which minerals?

(a) Toothpaste cleans your teeth. Abrasive minerals like silicone, limestone, potassium oxide and various phosphate minerals do the cleaning.

(b) Toothpaste cleans your teeth. Abrasive minerals like silica, limestone, aluminium oxide and various phosphate minerals do the cleaning.

(c) Toothpaste cleans your teeth. Abrasive minerals like silicate, limestone, aluminium oxide and various sulphate minerals do the cleaning.

(d) Toothpaste cleans your teeth. Abrasive minerals like silica, limestone, titanium oxide and various sulphate minerals do the cleaning.

271) Manganese is mainly used in the manufacturing of steel and ferro-manganese alloy. Nearly 10 kg of manganese is required to manufacture one tonne of steel. It is also used in manufacturing bleaching powder, insecticides and paints.

1. What are the uses of manganese?

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

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

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

(d) Manganese is mainly used in the manufacturing of zinc and ferro-magnesium alloy.

2. How much manganese is required to manufacture one tonne of steel?

(a) Nearly 100 kg of manganese is required to manufacture one tonne of steel.

(b) Nearly 10 kg of manganese is required to manufacture one tonne of steel.

(c) Nearly 1 kg of manganese is required to manufacture one tonne of steel.

(d) Nearly 1000 kg of manganese is required to manufacture one tonne of steel.

3. Manganese is mainly used in manufacturing of which alloy?

(a) Manganese is mainly used in manufacturing of ferro-phosphorus alloy.

(b) Manganese is mainly used in manufacturing of ferro-magnesium alloy.

(c) Manganese is mainly used in manufacturing of ferro-phosphate alloy.

(d) Manganese is mainly used in manufacturing of ferro-manganese alloy.

4. Which mineral is used to manufacture bleaching powder?

(a) Manganese is used to manufacture bleaching powder.

(b) Potassium is used to manufacture bleaching powder.

(c) Sulphur is used to manufacture bleaching powder.

(d) Sodium is used to manufacture bleaching powder.

5 Marks 30 x 5 = 150

272) Describe the distribution of coal in India.

273) Why do you think that solar energy has a bright future in India?

274) Differentiate between metallic and non-metallic minerals with examples

275) Highlight the importance of petroleum. Explain the occurrence of petroleum in India.

276) Why is conservation of mineral resources essential? Explain any three methods to conserve them

277) Why is it necessary to conserve mineral resources? Suggest any four way to conserve mineral resources.

278) Why is there a pressing need to use renewable energy resources in India? Explain any five reasons

279) How is energy a basic requirement for the economic development of the country? Explain with examples

280) Name any three major iron ore belts found in India. Write main features of each.

281) Name the two varieties of iron ore found in India having high content of iron. Mention the names of places in India which have the richest iron ore deposits.

282) Name the areas which have rich deposits of coal. What are the three major forms of coal? Write main features of each form.

283) What is a mine? Name the different types of mining prevalent in India. What is rat-hole mining and where in India in this type of mining done?

284) Name any two areas where large reserves of natural gas are found. Why is it called the fuel for the present century. Name any two popular uses of the natural gas today.

285) Why is it possible for India to develop the non-conventional energy sources? Name the different sources of energy that have been developed. Also name an area where each of these are popular.

286) In recent years, use of which fuel is gaining popularity for transport vehicles? What factors have provided impetus to India to increases its production?

287) Explain the importance of conservation of minerals. Highlight any three measures to conserve therm.

288) Why is conservation of minerals essential? Explain any four measures to conserve minerals.

289) Classify resources into two groups on the basis of exhaustibility. Mention the characteristics of each.

290) Which is the most abundantly available fossil fuel in India? Assess the important characteristics of its different forms.

291) How can biogas solve the energy problem mainly in rural India? Give your suggestion.

292) What are the major sources of energy in rural households of India? Identify the major problems faced due to these sources. Give suggestions to solve these problems.

293) "Minerals are an indispensable part of our lives." Justify this statement with suitable examples.

294) "Formation of coal is a long drawn process spread over various periods." Elaborate the statement with examples in Indian context.

295) "Nuclear energy is expected to play an increasingly important role in India." Give arguments to support this statement.

296) "There is a pressing need for using renewable energy sources in India." Justify the statement.

297) Read the following passage and answer the questions that follow.
Decaying plants in swamps produce peat which has a low carbon and high moisture content and low heat capacity. Lignite is low grade brown coal, which is soft with high moisture content. The principal lignite reserves are in Neyveli in Tamil Nadu and are used for generation of electricity. Coal that has been buried deep and subjected to increased temperatures is bituminous coal. It is the most popular coal in commercial use. Metallurgical coal is high grade bituminous coal which has a special value for smelting iron in blast furnaces. Anthracite is the highest quality hard coal.
In India coal occurs in rock series of two main geological ages, namely Gondwana, a little over 200 million years in age and in tertiary deposits which are only about 55 million years old. The major resources of Gondwana coal, which are metallurgical coal, are located in Damodar valley (West Bengal, Jharkhand). Jharia, Raniganj, Bokaro are important coalfields. The Godavari, Mahanadi, Son, and Wardha valleys also contain coal deposits. Tertiary coals occur in the North-Eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland.
(i) Which reserves are important for lignite in India?
(ii) In what extent do you agree that bituminous coal is metallurgical coal? State its one property.
(iii) Why is coal associated with geological ages? State where it is found?

298) A think tank has been given the task to identify the major sources of energy in rural areas and suggest solutions to solve the problem that exists.
Discuss the key problems posed by these sources of energy in rural areas that the think tank should consider while giving suggestions. Also specify the major suggestions that can be given.

299) Union Power and New and Renewable Energy Minister R K Singh on Tuesday said India will not compromise on meeting growing energy demands of the Indian economy, but will develop generation capacity with responsibility. He mentioned that we were nine years ahead in achieving the Nationally Determined Contributions (NDC) target of having 40 per cent of installed power capacity from non-fossil-fuel sources by 2030.
Source (edited): Business Standard
Analyse why there is pressing need to use non- conventional energy resources in the scenario of growing energy consumption in the country.

300) Analyse the impact of mining activities on the local environment and the health of the surrounding communities

301) "Non conventional resources are the best option to conserve the natural resources." Substantiate this statement with examples

Maps 8 x 10 = 80

302) Observe and study the following map showing distribution of minerals. Write the names of states where mica mines are located

303) Observe and study the following map showing iron ore belts. Write the names of iron mines and where are they located?

304) Study and Observe the following map of conventional source of energy. Write the names of coal mines and oil fields with respective states.

305) Observe and study the following map showing nuclear and thermal power plants. Write the names of states where the following power plants are located

306) On the given political map of India, identify and label any four of the following features with appropriate symbols.

(i) Iron are mine in Chhattisgarh

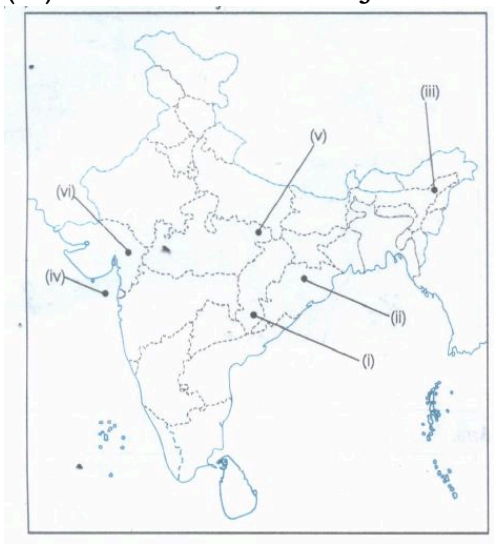
(ii) Coal mine in Odisha

(iii) An oil field in Assam

(iv) An offshore oil field near Mumbai High

(v) A power thermal plant in Madhya Pradesh

(vi) An oil field in Gujarat



307) On a given political map of India identify any for features and name the following

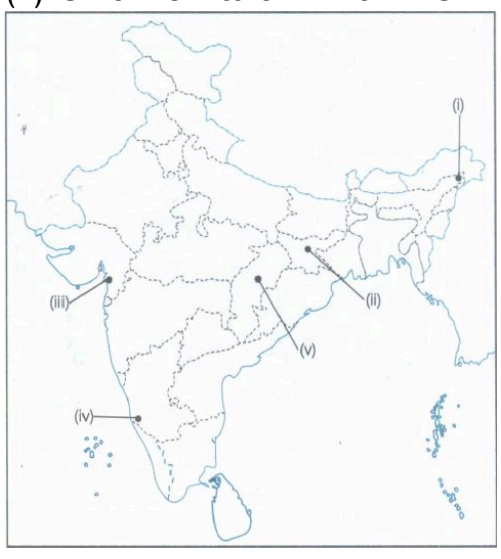
(i) One oil field in Assam.

(ii) Coal mine in Jharkhand.

(iii) One oil field in Gujarat

(iv) One iron are mine in Karnataka.

(v) One iron are mine in Chhattisgarh



308) Identify any four features from the following on the given map of India'

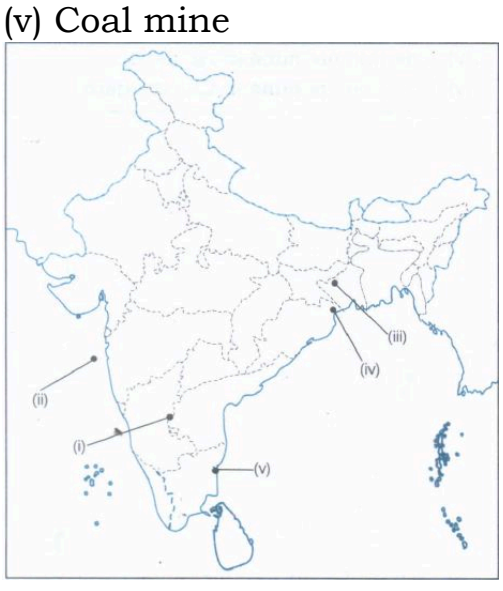
(i) Iron are mine

(ii) Oil field

(iii) Coal mine

(iv) Iron are mine in Odisha

(v) Coal mine



309) Locate the following Nuclear and thermal power plants on the map of India

Nuclear Power plants - Naraura, Kakrapara, Tarapur, Kalpakkam,

Thermal Power plants- Namrup,Ramagundam.

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