Marks - 8

# Case study based questions **10th Social Studies Minerals and Energy Resources**

#### Passage - 1

4 Marks

Read the source given below and answer the questions that follow: 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.

Q 1. What are the uses of manganese?

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

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

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

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

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

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

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

(3) Nearly 1 kg of manganese is required to manufacture one tonne of steel. (4) Nearly 1000 kg of manganese is required to manufacture one tonne of steel.

Marks - 8

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

(1) Manganese is mainly used in manufacturing of ferro-phosphorus alloy. (2) Manganese is mainly used in manufacturing of ferro-magnesium alloy. (3) Manganese is mainly used in manufacturing of ferro-phosphate alloy. (4) Manganese is mainly used in manufacturing of ferro-manganese alloy.

Q 4. Which mineral is used to manufacture bleaching powder?

(1) Manganese is used to manufacture bleaching powder.

- (2) Potassium is used to manufacture bleaching powder.
- (3) Sulphur is used to manufacture bleaching powder.

#### Passage - 2

4 Marks

Read the source given below and answer the questions that follow: Ferrous minerals account for about three-fourths of the total value of the production of metallic minerals. They provide a strong base for the development of metallurgical industries. India exports substantial quantities of ferrous minerals after meeting her internal demands.

Q 1. In production of metallic minerals, what is the contribution of ferrous minerals?

(1) Ferrous minerals account for about four-fifths of the total value of the production of metallic minerals.

(2) Ferrous minerals account for about one-fourths of the total value of the production of metallic minerals.

(3) Ferrous minerals account for about three-fourths of the total value of

the production of metallic minerals.

(4) Ferrous minerals account for about two-third of the total value of the

production of metallic minerals.

Marks - 8

Q 2. What does India do with the ferrous minerals?

(1) India imports substantial quantities of ferrous minerals after meeting her external demands.

(2) India exports substantial quantities of ferrous minerals after meeting her external demands.

(3) India imports substantial quantities of ferrous minerals for meeting her internal demands.

(4) India exports substantial quantities of ferrous minerals after meeting her internal demands.

Q 3. What is the use of ferrous minerals?

(1) Ferrous minerals provide a weak base for the development of metallurgical industries.

(2) Ferrous minerals provide a strong base for the development of chemical industries.

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

(4) Ferrous minerals provide a weak base for the development of chemical industries.

Q 4. Which mineral is used for the development of metallurgical industries?

(1) Ferrous minerals are used for the development of metallurgical industries.

(2) Synthetic minerals are used for the development of metallurgical industries.

(3) Non Ferrous minerals are used for the development of metallurgical industries.

(4) Fossil minerals are used for the development of metallurgical industries.

Marks - 8

# Case study based questions 10th Social Studies Minerals and Energy Resources

#### Passage - 1

4 Marks

Read the source given below and answer the questions that follow: The major iron ore belts in India are:

• Odisha-Jharkhand belt: In Odisha high grade hematite ore is found in Badampahar mines in the Mayurbhanj and Kendujhar districts. In the adjoining Singhbhum district of Jharkhand haematite iron ore is mined in Gua and Noamundi.

Durg-Bastar-Chandrapur belt lies in Chhattisgarh and Maharashtra. Very high grade hematites are found in the famous Bailadila range of hills in the Bastar district of Chhattisgarh. The range of hills comprise of 14 deposits of super high grade hematite iron ore. It has the best physical properties needed for steel making. Iron ore from these mines is exported to Japan and South Korea via Visakhapatnam port.
Ballari-Chitradurga-ChikkamagaluruTumakuru belt in Karnataka has large reserves of iron ore. The Kudremukh mines located in the Western Ghats of Karnataka are a 100 percent export unit. Kudremukh deposits are known to be one of the largest in the world. The ore is transported as slurry through a pipeline to a port near Mangalore.
Maharashtra-Goa belt includes the state of Goa and Ratnagiri district of Maharashtra. Though, the ores are not of very high quality, yet they are efficiently exploited. Iron ore is exported through Mormugao port.

Q 1. Name major iron-ore belts of India?

(1) Major iron-ore belts of India are- (a) Odisha-Jharkhand belt, (b) Bellary-Chitradurga-Chikmagalur-Tumkur belt, © Durg-Bastar-Punjab belt,
(d) Tamil Nadu-Goa belt.
(2) Major iron-ore belts of India are- (a) Odisha-Jharkhand belt, (b) Bel-

lary-Chitradurga-Chikmagalur-Tumkur belt, © Durg-Bastar-Chandrapur belt, (d) Maharashtra-Goa belt.

Marks - 8

(3) Major iron-ore belts of India are- (a) Odisha-West Bengal belt, (b) Bellary-Chitradurga-Chikmagalur-Tumkur belt, © Durg-jhargram-chnadragiri belt, (d) Kerala-Goa belt.
(4) Major iron-ore belts of India are- (a) Bihar-Jharkhand belt, (b) Bellary-Chitradurga-Chikmagalur-Tumkur belt, © Durg-champaran-kheda belt, (d) Karnataka-Goa belt.

Q 2. What is the significance of high grade hematite iron ore?

(1) It has the best physical properties needed for steel making. Hence this type of iron is exported to Japan and South Korea via Visakhapatnam port.
(2) It has the least physical properties needed for steel making. Hence this type of iron is exported to Japan and South Korea via Mangalore port.
(3) It has the best chemical properties needed for aluminium making. Hence this type of iron is exported to Japan and South Korea via Visakhapatnam.

(4) It has the best chemical properties needed for steel making. Hence this type of iron exported to Japan and South Korea via Mangalore port.

Q 3. What is the importance of Kudremukh mines?

(1) Kudremukh deposits are known to be one of the smallest in the world. The ore is transported as slurry through a pipeline to a port near Mangalore.

(2) Kudremukh deposits are known to be one of the largest in the world. The ore is transported as slurry through a pipeline to a port near Mangalore.

(3) Kudremukh deposits are known to be one of the lightest in the world. The ore is transported as slurry through a pipeline to a port near Visakhap-

#### atnam.

#### (4) Kudremukh deposits are known to be one of the smallest in the world. The ore is transported as slurry through a pipeline to a port near Visakhapatnam.

Marks - 8

Q 4. Iron ores from which mine are exported to Japan and South Korea?

(1) Iron ore from Durg-Bastar-Chandrapur belt that lies in Chhattisgarh and Maharashtra is exported to Japan and South Korea.

(2) Iron ore from Durg-Bastar-Chandrapur belt that lies in Chhattisgarh and Odisha is exported to Japan and South Korea.

(3) Iron ore from Durg-Bastar-Chandrapur belt that lies in Chhattisgarh and Madhya Pradesh is exported to Japan and South Korea.

(4) Iron ore from Durg-Bastar-Chandrapur belt that lies in Jharkhand and Maharashtra is exported to Japan and South Korea.

Read the source given below and answer the questions that follow: Petroleum or mineral oil is the next major energy source in India after coal. It provides fuel for heat and lighting, lubricants for machinery and raw materials for a number of manufacturing industries. Petroleum refineries act as a "nodal industry" for synthetic textile, fertiliser and numerous chemical industries. Most of the petroleum occurrences in India are associated with anticlines and fault traps in the rock formations of the tertiary age. In regions of folding, anticlines or domes, it occurs where oil is trapped in the crest of the upfold. The oil bearing layer is a porous limestone or sandstone through which oil may flow. The oil is prevented from rising or sinking by intervening non-porous layers. Petroleum is also found in fault traps between porous and non-porous rocks. Gas, being lighter usually occurs above the oil. About 63 per cent of India's petroleum production is from Mumbai High, 18 per cent from Gujarat and 16 per cent from Assam. From the map locate the 3 major offshore fields of western India. Ankleshwar is the most important field of Gujarat. Assam is the oldest oil producing state of India. Digboi, Naharkatiya and Moran-Hugrijan are the important oil fields in the state.

# Q 1. What are the uses of petroleum and what does petroleum refineries act as?

Marks - 8

(1) Petroleum provides fuel for iron and steel, lubricants for machinery and raw materials for a number of manufacturing industries. Petroleum refineries act as a "nodal industry" for natural textile, fertiliser and numerous chemical industries.

(2) Petroleum provides fuel for heat and lighting, lubricants for machinery and raw materials for a number of manufacturing industries. Petroleum refineries act as a "nodal industry" for synthetic textile, fertiliser and numerous chemical industries.

(3) Petroleum provides fuel for water and lighting, lubricants for iron and raw materials for a number of manufacturing industries. Petroleum refineries act as a "nodal industry" for synthetic dyes, fertiliser and numerous chemical industries.

(4) Petroleum provides fuel for cold and lighting, lubricants for manures and raw materials for a number of manufacturing industries. Petroleum refineries act as a "nodal industry" for synthetic textile, fertiliser and numerous chemical industries.

Q 2. Where most of the petroleum occurs in India?

 Most of the petroleum occurrences in India are associated with subclines and fault traps in the rock formations of the primary age.
 Most of the petroleum occurrences in India are associated with anticlines and fault traps in the rock formations of the tertiary age.
 Most of the petroleum occurrences in India are associated with anticlines and fault traps in the rock formations of the sedimentary age.
 Most of the petroleum occurrences in India are associated with anticlines and fault traps in the rock formations of the sedimentary age.
 Most of the petroleum occurrences in India are associated with synclines and domes traps in the rock formations of the primary age.

Q 3. Which is the oldest oil producing state of India?

(1) Maharashtra is the oldest oil producing state of India.
 (2) Manipur is the oldest oil producing state of India.
 (3) Assam is the oldest oil producing state of India.
 (4) Jharkhand is the oldest oil producing state of India.

Marks - 8

Q 4. Name some important oil fields in the state of Assam.

(1) Digboi, Naharkatiya and Sonar-Hugrijan are the important oil fields in the state.

(2) Ankleshwar, Naharkatiya and Moran-Hugrijan are the important oil fields in the state.

(3) Digboi, Naharkatiya and Moran-Hugrijan are the important oil fields in the state.

(4) Digboi, Dubrigarh and Moran-Hugrijan are the important oil fields in the state.

Marks - 8

# Case study based questions 10th Social Studies Minerals and Energy Resources

#### Passage - 1

4 Marks

Read the source given below and answer the questions that follow: Electricity has such a wide range of applications in today's world that, its per capita consumption is considered as an index of development. Electricity is generated mainly in two ways: by running water which drives hydro turbines to generate hydro electricity; and by burning other fuels such as coal, petroleum and natural gas to drive turbines to produce thermal power. Once generated the electricity is exactly the same. Hydro electricity is generated by fast flowing water, which is a renewable resource. India has a number of multi-purpose projects like the Bhakra Nangal, Damodar Valley corporation, the Kopili Hydel Project etc. producing hydroelectric power. Thermal electricity is generated by using coal, petroleum and natural gas. The thermal power stations use non-renewable fossil fuels for generating electricity.

Q 1. Why is electricity considered as an index of development?

(1) Electricity has such a wide range of applications in today's world that, its per capita consumption is considered as an index of development.
(2) Electricity has such a less range of applications in today's world that, its per capita production is considered as an index of development.
(3) Electricity has such a wide range of applications in today's world that, its per capita investment is considered as an index of development.
(4) Electricity has such a low range of applications in today's world that, its per capita production is considered as an index of development.

Q 2. How is electricity generated?

Marks - 8

(1) Electricity is generated mainly in two ways: by running water which drives hydro turbines to generate hydro electricity; and by burning other fuels such as coal, petroleum and natural gas to drive turbines to produce thermal power.

(2) Electricity is generated mainly in two ways: by groundwater which drives hydro turbines to generate hydro electricity; and by burning other fuels such as coal, petroleum and natural gas to drive turbines to produce thermal power.

(3) Electricity is generated mainly in two ways: by running water which drives hydro turbines to generate thermal electricity; and by burning other fuels such as coal, petroleum and natural gas to drive turbines to produce hydro power.

(4) Electricity is generated mainly in two ways: by groundwater which drives thermal turbines to generate thermal electricity; and by burning other fuels such as coal, petroleum and natural gas to drive turbines to produce fossil power.

Q 3. How is hydroelectricity generated?

(1) Hydro electricity is generated by slow flowing water, which is a non-renewable resource. India has a number of single-purpose projects like the Bhakra Nangal, Damodar Valley corporation, the Kopili Hydel Project etc. producing hydroelectric power.

(2) Hydro electricity is generated by slow flowing water, which is a renewable resource. India has a number of single-purpose projects like the Bhakra Nangal, Damodar Valley corporation, the Kopili Hydel Project etc. producing hydroelectric power.

(3) Hydro electricity is generated by still flowing water, which is a non-renewable resource. India has a number of multi-purpose projects like the Bhakra Nangal, Damodar Valley corporation, the Kopili Hydel Project etc. producing hydroelectric power.
(4) Hydro electricity is generated by fast flowing water, which is a renewable resource. India has a number of multi-purpose projects like the Bhakra Nangal, Damodar Valley corporation, the Kopili Hydel Project etc. producing hydroelectric power.

Marks - 8

#### Q 4. How is thermal electricity generated?

(1) Thermal electricity is generated by using coal, potassium and national gas. The thermal power stations use renewable fossil fuels for generating electricity.

(2) Thermal electricity is generated by using coal, water and solar gas. The thermal power stations use non-renewable fossil fuels for generating electricity.

(3) Thermal electricity is generated by using wind, petroleum and natural gas. The thermal power stations use renewable fossil fuels for generating electricity.

(4) Thermal electricity is generated by using coal, petroleum and natural

gas. The thermal power stations use non-renewable fossil fuels for generating electricity.

#### Passage - 2

4 Marks

Read the source given below and answer the questions that follow: Natural gas is an important clean energy resource found in association with or without petroleum. It is used as a source of energy as well as an industrial raw material in the petrochemical industry. Natural gas is considered an environment friendly fuel because of low carbon dioxide emissions and is, therefore, the fuel for the present century. Large reserves of natural gas have been discovered in the Krishna- Godavari basin. Along the west coast the reserves of the Mumbai High and allied fields are supplemented by finds in the Gulf of Cambay. Andaman and Nicobar islands are also important areas having large reserves of natural gas.

The 1700 km long Hazira-Vijaipur - Jagdishpur cross country gas pipeline links Mumbai High and Bassein with the fertilizer, power and industrial complexes in western and northern India. This artery has provided an impetus to India's

gas production. The power and fertilizer industries are the key users of natural gas. Use of Compressed Natural Gas (CNG) for vehicles to replace liquid fuels is gaining wide popularity in the country.

Marks - 8

#### Q 1. Where are large reserves of natural gas discovered?

(1) Large reserves of natural gas have been discovered in the Kaveri- Godavari basin. Along the west coast the reserves of the Mumbai High and allied fields are supplemented by finds in the Gulf of Cambay. Andaman and Nicobar islands are also important areas having large reserves of natural gas.

(2) Large reserves of natural gas have been discovered in the Krishna-Kaveri basin. Along the east coast the reserves of the Mumbai High and allied fields are supplemented by finds in the Gulf of Cambay. Andaman and Nicobar islands are also important areas having large reserves of natural gas.

(3) Large reserves of natural gas have been discovered in the Ganga-Brahmaputra basin. Along the east coast the reserves of the Mumbai High and allied fields are supplemented by finds in the Gulf of Cambay. Andaman and Nicobar islands are also important areas having large reserves of natural gas.
(4) Large reserves of natural gas have been discovered in the Krishna-Godavari basin. Along the west coast the reserves of the Mumbai High and allied fields are supplemented by finds in the Gulf of Cambay. Andaman and Nicobar islands are also important areas having large reserves of the Mumbai High and allied fields are supplemented by finds in the Gulf of Cambay. Andaman and Nicobar islands are also important areas having large reserves of natural gas.

Q 2. Why does natural gas considered as an environment friendly gas?

(1) Natural gas is considered an environment friendly fuel because of low carbon dioxide emissions and is, therefore, the fuel for the present century.

(2) Natural gas is considered an environment friendly fuel because of high carbon monoxide emissions and is, therefore, the fuel for the present century.

(3) Natural gas is considered an environment friendly fuel because of low carbon monoxide emissions and is, therefore, the fuel for the present century.

Marks - 8

(4) Natural gas is considered an environment friendly fuel because of low carbon dioxide emissions and is, therefore, the fuel for the present century.

#### Q 3. Which industries are key users of natural gas?

(1) The power and fertilizer industries are the key users of natural gas.
 (2) The iron and sugar industries are the key users of natural gas.
 (3) The cotton and rubber industries are the key users of natural gas.
 (4) The plastic and manure industries are the key users of natural gas.

Q 4. What is the full form of CNG?

(1) The full form of CNG is Compressed National Gas.
 (2) The full form of CNG is Compressor National Gas.
 (3) The full form of CNG is Compressed Natural Gas.
 (4) The full form of CNG is Compress Natural Gas.