CLASS 9 GEOGRAPHY QUESTION BANK

Comprehensive Chapter-wise Study Guide

CHAPTER 3: ROTATION AND REVOLUTION

I. Multiple Choice Questions

1. The movement of earth around the sun in an elliptical orbit is called: [Recall]

(a) Rotation
(b) Revolution
(c) Circulation
(d) Inclination

2. The spinning of earth on its axis once is completed in: [Recall]

(a) 24 hours
(b) 01 hour
(c) 12 hours
(d) 10 hours

3. The direction of earth during spinning on its axis is from: [Recall]

(a) South to North
(b) East to West
(c) West to East
(d) North to South

4. During Aphelion, the earth moves away from the sun and the distance between these two is: [Understanding]

(a) 150 million km
(b) 152 million km
(c) 250 million km
(d) 147 million km

5. The solstice means sun standing still. It occurs on: [Recall]

(a) 21st March and 21st September
(b) 21st March and 21st December
(c) 22nd December and 21st June
(d) 21st June and 21st September

6. Vernal Equinox is also known as: [Recall]

(a) Spring Equinox
(b) Autumn Equinox
(c) Winter Equinox
(d) Summer Equinox

7. The date on which the Arctic Circle experience the 'midnight' sun is: [Recall]

(a) 21st June
(b) 21st March
(c) 21st December
(d) 21st November

8. The time taken by earth to complete one revolution around the sun is: [Recall]

(a) 365 days
(b) 365 days and 6 hours
(c) 365 days and 12 hours
(d) 365 days and 4 hours

9. Equinox means: [Recall]

(a) Equal latitude and longitude
(b) Equal days in all months of a year
(c) Equal day and night
(d) None of the above

10. Which amongst the following will be a leap year? [Recall]

(a) 2023
(b) 2026
(c) 2030
(d) None of the above

11. Time scale that is based on earth's rate of rotation measured relative to the fixed stars which is 23 hr 56 min and 4.09 sec, is termed as: [Understanding]

(a) Sidereal day
(b) Sunny day
(c) Rainy day
(d) Foggy day

12. Pick the incorrect matching. [Recall]

(a) Vernal Equinox – 21st March
(b) Autumnal Equinox – 23rd September
(c) Summer Solstice – 21st June
(d) Winter Solstice – 22nd September

13. The sun rises in the east and sets in the west because of rotation of earth from: [Recall]

(a) East to West
(b) West to East
(c) Either (a) or (b)
(d) None of the above

II. Give Reasons for the Following [Analysis]

1. Altitude of the Sun varies at a place according to seasons.

Ans. The Earth's axis is tilted at an angle of 23½°. This has the effect of making the Sun low on the horizon during winter and higher during the summer.

2. Seasons are reversed in the Northern and Southern Hemisphere.

Ans. Because the Earth's axis is tilted, when there is Summer in the Northern Hemisphere that part is closer to the Sun. When the Earth is on the other side of the Sun, the Southern Hemisphere is closer. This exposure alternates as the Earth revolves on its orbit.

3. Days and nights are equal at all places on the Earth on March 21.

Ans. Days and nights are equal at all places on the Earth on March 21 as circle of illumination passes through the poles and thus divides the Earth into equal halves.

4. Winds get deflected from their normal path.

Ans. Winds get deflected from their normal path due to Coriolis force which is caused by rotation.

5. The region beyond the Arctic Circle is known as the 'Land of the Midnight Sun'.

Ans. Because at the Arctic Circle (66½° N) during summer on June 21, the Sun never sets in mid summer and there is daylight for 24 hours as the North Pole is inclined towards the Sun.

6. The speed of rotation at Singapore is much faster than that at Tokyo or Russia.

Ans. The speed of rotation decreases from Equator to Poles.

7. The Mid-day Sun can be seen overhead in Chennai twice a year, but not even once in Delhi. Why?

Ans. Because the noon sun stands at the Zenith on two days when the Sun's declination coincides with Chennai's latitude (13° N). These two days are April 23 and Aug 19.

8. Noon is hotter than morning.

Ans. Because at noon Earth is closer to the Sun and is inclined more towards it.

9. The variation in the length of day and night goes on increasing towards the Poles.

Ans. Due to the inclination of the axis of the earth.

10. The Sun is never overhead beyond the Tropics.

Ans. As tropic means turning point, when Sun has reached its northernmost and southernmost limits on June 21 and December 22 respectively, it appears to turn southward and northward.

III. Differentiate Between the Following [Analysis]

1. Aphelion and Perihelion

Aphelion	Perihelion
(i) The Earth is said to be an Aphelion when it moves away from the Sun.	(i) The Earth is said to be in perihelion when it moves closer to the Sun.
(ii) The distance between the Sun and the Earth is maximum 152 million km approximately.	(ii) The distance between the Sun and the Earth is minimum 147 million km approximately.

2. Vernal and Autumnal Equinox

Vernal Equinox	Autumnal Equinox
(i) The Sun appears to stand still on the Tropic of Capricorn and then appears to move northwards towards the Equator.	(i) The Sun appears to move southwards and crosses the Equator.
(ii) It occurs on March 21st.	(ii) It occurs on September 23rd.

3. Summer Solstice and Winter Solstice

Summer Solstice	Winter Solstice
(i) The North Pole is inclined towards the Sun and the South Pole is turned away from it.	(i) South Pole is inclined towards the Sun and the North Pole is away from it.
(ii) The rays of the Sun fall vertically at the Tropic of Cancer.	(ii) The rays of the Sun fall vertically at the Tropic of Capricorn.

CHAPTER 4: STRUCTURE OF THE EARTH

I. Multiple Choice Questions

1. The uppermost layer of the earth is known as: [Recall]

(a) Lithosphere
(b) Mesosphere
(c) Stratosphere
(d) Barysphere

2. Lithosphere is also known as: [Recall]

(a) Sial
(b) Sima
(c) Crust
(d) Mantle

3. Crust forms: [Recall]

(a) 1% of the radius of the earth
(b) less than 1% of the radius of the earth
(c) 5% of the radius of the earth
(d) less than 5% of the radius of the earth

4. The part of the earth which lies below the lithosphere is known as: [Recall]

(a) Sial
(b) Sima
(c) Mesosphere
(d) Barysphere

5. 'Mantle' is also known as: [Recall]

(a) Lithosphere
(b) Mesosphere
(c) Barysphere
(d) Atmosphere

6. The thickness of mantle is about: [Recall]

(a) 500–600 km
(b) 700–2900 km
(c) 2840–2900 km
(d) 2800–2900 km

7. Which of the following comprise about 83% of the earth's volume? [Recall]

(a) Lithosphere
(b) Mantle
(c) Core
(d) Stratosphere

8. Innermost layer of the earth is: [Recall]

(a) Mesosphere
(b) Lithosphere
(c) Barysphere
(d) Stratosphere

II. Give Reasons for the Following [Analysis]

1. In spite of the high temperature, the Earth is in a solid form in the centre.

Ans. The temperature in the centre is quite high but pressure of the overlying layers keeps both the mantle and the lower parts of the crust in a solid state.

2. The core explains the cause of the Earth's Magnetism.

Ans. The core explains the cause of the Earth's magnetism because of the presence of heavy metals and plenty of iron.

3. The rocks of the interior part of the Earth tend to be converted into liquid.

Ans. The rocks of the interior part of the Earth tend to be converted into liquid because of the high temperature in this part.

III. Differentiate Between the Following [Analysis]

1. Sial and Sima

Sial	Sima
(i) Outer part of the crust.	(i) Lower part of the crust.
(ii) Consists of silicates and aluminium.	(ii) Consists of silicates and magnesium.

2. Mantle and Crust

Mantle	Crust
(i) It lies below lithosphere.	(i) It is the uppermost layer of the Earth.
(ii) It consists of ultra-basic rocks rich in iron and magnesium.	(ii) It consists of a stony or rocky crust.

CHAPTER 5: LANDFORMS OF THE EARTH

I. Multiple Choice Questions

1. An area of land rising abruptly results in the formation of: [Recall]

(a) Plateaus
(b) Mountains
(c) Glaciers
(d) Lands

2. An elevated upland area characterised by flat and rough top surface with extensive size is known as: [Recall]

(a) Plains
(b) Mountains
(c) Plateaus
(d) Glaciers

3. The mountains which are formed due to sedimentary deposits and large scale earth movements are categorised as: [Recall]

(a) Fold mountains
(b) Block mountains
(c) Volcanic mountains
(d) Residual mountains

4. The mountains which are formed due to faulting which occurred due to tensional and compressive forces are categorised as: [Recall]

(a) Volcanic mountains
(b) Residual mountains
(c) Block mountains
(d) Fold mountains

5. Volcanic mountains have been formed by the: [Recall]

(a) faulting which occurred due to compressive and tensional forces
(b) sedimentary deposits
(c) accumulation of lava around the crater
(d) layering with sandstone and limestone

6. Weathering and erosion for a long time through winds, rain, frost results in the formation of: [Recall]

(a) Block mountain
(b) Fold mountain
(c) Residual mountain
(d) Volcanic mountain

7. A plateau formed between a mountain range and coastal plain is called: [Recall]

(a) Continental
(b) Volcanic
(c) Piedmont
(d) Intermontane

II. Give Reasons for the Following [Analysis]

1. The crust of the Earth is neither stable nor permanent.

Ans. The crust of the Earth is neither stable nor permanent because there are certain forces and movements which are always active in shaping the Earth's crust.

2. Some landforms formed by volcanic cones have a flattened cone of gentle slope whereas others have sharp ones.

Ans. Some landforms formed by volcanic cones have a flatten cone with a gentle slope whereas others have sharp ones because when the lava is thin and basic in its composition, it spreads over a long distance forming a flatten cone of gentle slope. When the lava is thick and of acid composition it forms small and sharp cones.

3. Flood plains are formed in the middle region of a river valley.

Ans. Flood plains are formed in the middle region of a river valley because in the middle the stream becomes sluggish in its flow and its course becomes meandering.

4. The Nilgiri Hills have been lowered.

Ans. Because they have worn down from previously existing elevated regions.

5. Plateaus have a large even surface.

Ans. Because they are generally made up of sandstone, shale and limestone which give them a large, flat surface area.

6. Earth movements have modified the Earth's surface.

Ans. The largest force that changes our planet's surface is the movement of the earth's outer layer. The Earth's outer layer, called the lithosphere is broken down into plates which fit together like a jigsaw puzzle. These plates move very slowly and are called the tectonic plates.

7. Young fold mountains have rugged relief features.

Ans. Because they have been subjected to denudation for a comparatively short period only.

8. Young fold mountains are liable to earthquake and volcanic action.

Ans. Because young fold mountains mostly lie in two belts (i) circum-pacific mountain belt (ii) mid-world mountain belt.

III. Differentiate Between the Following [Analysis]

1. Plains and Plateaus

Plains	Plateaus
These are low lying flat land surface with the least difference in its highest and lowest points.	These are extensive upland areas characterized by a flat and rough top surface.

2. Fold mountains and Block mountains

Fold mountains	Block mountains
These mountains have been formed due to folding of sedimentary rock strata.	These mountains are the result of faulting which are formed due to tensional and compressive forces.

3. Structural plains and Erosional plains

Structural plains	Erosional plains
These plains are formed by the endogenic forces.	These plains are formed as a result of weathering and erosion.

4. Plains and Mountains

Plains	Mountains
A relatively flat and a low-lying land surface with the least difference between its highest and lowest points is called a plain.	An uplift part of the Earth which stands conspicuously above the surrounding areas is called mountain.

5. Desert plains and Alluvial plains

Desert plains	Alluvial plains
(i) These are formed due to erosional work of wind in the desert areas.	(i) These are formed by the depositional work of rivers or streams.
(ii) Example : Sahara in Africa.	(ii) Example : Bhabar in UP.

CHAPTER 6: ROCKS AND ROCK CYCLE

I. Multiple Choice Questions

1. Stratified rocks are also known as: [Recall]

(a) Extrusive rocks
(b) Intrusive rocks
(c) Sedimentary rocks
(d) Metamorphic rocks

2. When lava pours out on earth's surface and solidifies on the surface, it is termed as: [Recall]

(a) Intrusive rocks
(b) Extrusive rocks
(c) Sedimentary rocks
(d) Metamorphic rocks

3. Which of the following is incorrectly matched. [Understanding]

(a) Shale – Slate
(b) Coal – Graphite
(c) Granite – Gneiss
(d) Clay – Quartzite

4. The deposits laid by winds are called: [Recall]

(a) Alluvial sediments
(b) Aeolian sediments
(c) Graphite
(d) Magma

5. A large emplacement of igneous intrusive rock that forms from cooled magma deep in the earth's crust is known as: [Recall]

(a) Basaltic magma
(b) Laccolith
(c) Batholith
(d) Dyke

II. Give Reasons for the Following [Analysis]

1. Igneous rocks are also known as primary rocks.

Ans. Because these rocks were the first to be formed. They are the basis of formation of other types of rocks.

2. Extrusive igneous rocks generally have small crystals.

Ans. Because the rate of cooling is more rapid than in the interior, hence the crystals are finer.

3. Silicates are the most common rock forming minerals.

Ans. Because 85% of the atoms in the crust are oxygen or silicon atoms, the vast majority of common (rock-forming) minerals are silicates.

4. The Dead Sea abounds in chemically formed sedimentary rocks.

Ans. Because chemical sediments are commonly formed by the process of evaporation of water containing salt in solution. Rock salt is an example of chemically formed sedimentary rocks common in the Dead Sea.

5. All igneous rocks are generally crystalline in nature.

Ans. All igneous rocks are generally crystalline in nature as these rocks are formed by the cooling and hardening of earth material.

32. Sedimentary rocks are also called stratified rocks.

Ans. Sedimentary rocks have layers due to which they are called stratified or layered rocks.

6. Metamorphic rocks are considered good for the use as building material.

Ans. Metamorphic rocks are considered good for the use as building material because under pressure and heat, various igneous and sedimentary rocks are metamorphosed to produce new rocks (metamorphic rocks). Sandstone may be changed into quartzite, limestone into marble and shale into slate, etc. which are used as building material.

III. Differentiate Between the Following [Analysis]

1. Acidic igneous rocks and Basic igneous rocks

Acidic igneous rocks	Basic igneous rocks
(i) When magma fails to reach the surface and gets solidified to produce intrusive rocks, these are called acidic igneous rocks.	(i) When magma has greater possibility of reaching the surface before getting solidified then rock is formed. It is known as basic igneous rock.
(ii) Magma has a higher content of silica having a lower content of metallic minerals.	(ii) Magma has a lower content of silica having a larger content of metallic minerals.

2. Calcareous rocks and Carbonaceous rocks

Calcareous rock	Carbonaceous rocks

The organisms live in the water of the continental shelf, extract calcium carbonate from the sea water to build up their skeletons and shells. Thus the rock is formed known as calcareous rocks.	Because of pressure and heat the ferns, mosses, twigs and plants are often buried and accumulate in thickness, they lose most of their elements except carbon which in stages becomes peat, lignite or coal. These are known as carbonaceous rocks.

3. Thermal metamorphism and Dynamic metamorphism

Thermal metamorphism	Dynamic metamorphism
When the transformation of the original rock takes place principally because of the influence of high temperature, the rock is said to be caused through thermal metamorphism.	When the transformation of the original rock takes place mainly because of the influence of pressure at a great depth within the Earth's crust, it is known as dynamic metamorphism.

CHAPTER 7: VOLCANOES

I. Multiple Choice Questions

1. Horizontal deposits of lava layers inside the earth are called as: [Recall]

(a) Dykes
(b) Phaccoliths
(c) Laccoliths
(d) Sills

2. Dome-shaped instructions of lava are called: [Recall]

(a) Laccoliths
(b) Phaccoliths
(c) Sills
(d) Dykes

3. What is formed when magma chamber is no longer able to emit sufficient magma and results in the collapse of a cone either partly or wholly? [Recall]

(a) Cinder cone
(b) Caldera
(c) Composite cone
(d) Lava cone

4. Krakatoa volcanoes are found in: [Recall]

(a) Japan
(b) Italy
(c) Indonesia
(d) USA

5. A ring-shaped coral reefs island or series of islets is termed as: [Recall]

(a) Crater lake
(b) Atoll
(c) Depression
(d) Dykes

6. Pick the incorrect statement regarding features of Crater lake. [Understanding]

(a) Located in south-central oregon in western US
(b) Also known as the 'old man of the lake'
(c) Crater lake is not a caldera lake
(d) It is famous for its deep blue colour and water clarity.

7. Which of the following is an example of dormant volcano? [Recall]

(a) Mt. Kilimanjaro in Africa
(b) Volcanoes in West Indies
(c) Mauna Loa in USA
(d) Fujiyama in Japan

8. The volcanoes which are inactive for so long and are likely not to occur in future are called: [Recall]

(a) Extinct Volcanoes
(b) Dormant Volcanoes
(c) Active Volcanoes
(d) None of the above

II. Give Reasons for the Following [Analysis]

1. Some of the volcanic eruptions are followed by rainfall.

Ans. Some of the volcanic eruptions are followed by rainfall because besides the molten magma the volcanic material includes a number of gases also. As the magma rises to the surface, the gases including steam escape explosively through the vent. The steam escaping from a volcano rises high in the air and upon cooling it leads to rainfall.

2. Water is also one of the causes of volcanic eruption.

Ans. Water is also one of the causes of volcanic eruption because when the water gets into contact with hot lava, it dissolves and crystallises which makes the dissolved water free. This freed water at high temperature and pressure escapes out of many holes and causes explosion.

3. Volcanic activity and earthquakes occur in the same belt.

Ans. Earthquakes are found in areas of volcanic activity as internal activity in volcanic areas causes vibrations in the earth's crust. These are found in areas of weakness in the earth.

III. Differentiate Between the Following [Analysis]

1. Cinder cones and Ash cones

Cinder cones	Ash cones

(i) These are made up of solid rock particles ejected by a volcano.	(i) These are made of fine dust of ash.
(ii) They have a steep concave slope.	(ii) They have a slightly gentle slope.

2. Acid lava cone and Basic lava cone

Acid lava cone	Basic lava cone
(i) The lava having a large content of silica and a lower content of metallic minerals has a higher melting point.	(i) The lava having a low content of silica and a higher content of metallic minerals has lower melting point.
(ii) Lava solidifies near the vent.	(ii) Lava spreads over a large area.

3. Dormant volcanoes and Extinct volcanoes

Dormant volcanoes	Extinct volcanoes
(i) These are known as sleeping volcanoes as they have not erupted for a long time. But some of them might erupt in future. e.g., Volcanoes in West Indies.	(i) They have been inactive for so long that they are not likely to erupt in future. e.g., Mt. Kilimanjaro in Africa.

4. Central type eruption and Fissure type eruption

Central type eruption	Fissure type eruption
(i) Eruption occurs at one point and the magma and other volcanic material rise to the surface through a narrow opening and get accumulated around the point of eruption in the form of a conical hill. e.g., Mt. Vesuvius.	(i) The material and magma are ejected through a long narrow opening in the crust of the Earth and spread over a large area forming vast plateaus or shields. e.g., Deccan Trap of India.

CHAPTER 8: EARTHQUAKES

I. Multiple Choice Questions

1. The science of the study of earthquakes is called: [Recall]

(a) Geology
(b) Zoology

(c) Seismology
(d) Volcanology

2. The tremors and the vibrations in the crust of the earth produced by internal forces results in: [Recall]

(a) Global warming
(b) Earthquakes
(c) Volcanoes
(d) Weathering

3. Primary earthquake measuring instrument is called: [Recall]

(a) Seismograph
(b) Anemometer
(c) Barometer
(d) Thermometer

4. The point of origin of an earthquake is termed as: [Recall]

(a) hotspot
(b) epicentre
(c) hypocenter
(d) scale

5. The hypocenter is the point: [Understanding]

(a) within the earth where an earthquake rupture starts
(b) directly above earth surface vertically above the focus
(c) Both of the above
(d) None of the above

6. The areas of high temperature in the interior of the earth are called: [Recall]

(a) Hypocentre
(b) Hotspots
(c) Epicentre
(d) Scale

7. The earthquakes are measured on: [Recall]

(a) Simple scale
(b) Metre scale
(c) Richter scale
(d) Fahrenheit scale

8. Which of the following is known as "Ring of Fire"? [Recall]

(a) Mid Continental Belt
(b) Circum-Pacific Belt
(c) Coastal Belt
(d) Stable region like Deccan Plateau

II. Give Reasons for the Following [Analysis]

1. About 66% earthquakes of the world are recorded in the Circum-Pacific Belt.

Ans. The Circum-Pacific Belt has the ideal conditions for the occurrence of earthquakes such as:
(a) Junction of continental and oceanic margins
(b) Zone of young fold mountains
(c) Zone of active volcanoes
(d) Subduction zone of destructive convergent plate boundaries.

2. Distribution of earthquakes coincides with the distribution of volcanoes.

Ans. If we look at the map showing the distribution of volcanoes in the world, it will be clear that volcanoes are found in certain well-defined belts and are not randomly distributed on the surface of the earth. These belts coincide with the major lines of weakness in the earth's crust and happen to be earthquake zones also. These weaker zones are generally on the margins of plates of the continents and ocean basins.

3. The Northern Plains of India experience earthquakes more frequently.

Ans. The Northern Plains of India experience earthquakes more frequently as these plains are situated close to the Mid-World Mountain Belt of crustal instability.

4. Deep trenches are formed on the ocean floor.

Ans. Deep trenches are formed on the ocean floor because of the sinking of the oceanic crust in the zone of subduction.

III. Differentiate Between the Following [Analysis]

1. Seismic focus and Epicentre

Seismic focus	Epicentre
(i) The point in the interior of the Earth from where the earthquake tremors originate is called the seismic focus.	(i) The point on the Earth's surface vertically above the focus is called the epicentre.
(ii) Earthquake tremors move from the focus in all directions.	(ii) The Earthquake is felt first at the epicentre.

2. Constructive plate movement and Destructive plate movement

Constructive plate movement	Destructive plate movement
When the molten matter from below add new crust along mid-oceanic ridges, it is called the constructive plate movement.	When the crust at the outer edges of the plates in oceanic trenches gets destroyed, it is called the destructive plate movement.

CHAPTER 9: WEATHERING AND DENUDATION

I. Multiple Choice Questions

1. The process by which a bedrock may decay or crumble because of atmospheric actions or chemical actions, is known as: [Recall]

(a) Denudation
(b) Weathering
(c) Erosion
(d) Transportation

2. Weathering may be categorised as: [Recall]

(a) Physical weathering
(b) Chemical weathering
(c) Biological weathering
(d) All of the above

3. Change in the chemical composition of the minerals present in the rock is known as: [Recall]

(a) Decomposition
(b) Exfoliation
(c) Oxidation
(d) Frost action

4. Disintegration is the process when there is: [Recall]

(a) change in the chemical composition of the minerals in rock.
(b) physical break up of the rock into smaller fragments.
(c) peeling of their surface layer of rock.
(d) freezing of water in cracks and opening of rock.

5. Weathering which involves living organisms is known as: [Recall]

(a) Physical weathering
(b) Chemical weathering
(c) Biological weathering
(d) None of the above

6. Chemical weathering includes: [Recall]

(a) Carbonation
(b) Hydration
(c) Oxidation
(d) All of the above

7. Repeated contraction and expansion of rocks due to freezing of water at night and melting during day is called: [Recall]

(a) Granular disintegration
(b) Exfoliation
(c) Block disintegration
(d) Frost action

8. Pick the incorrect matching in context of type of weathering. [Understanding]

(a) Exfoliation – Mechanical weathering
(b) Carbonation – Chemical weathering
(c) Involvement of living organisms – Biological weathering
(d) Granular disintegration – Chemical weathering

9. Yellow river (Hwang-Ho) looks yellow because of: [Recall]

(a) growing of brown algae
(b) reflection of sunlight
(c) yellow coloured loess deposits in river
(d) None of the above

II. Give Reasons for the Following [Analysis]

1. The rate of erosion is high in arid and semi-arid areas.

Ans. The rate of erosion is high in arid and semi-arid areas because the surface of these areas is dry. The wind can easily pick the finer particles of soil.

2. The river Hwang-Ho is known as the 'Sorrow of China'.

Ans. The river Hwang-Ho is known as the 'Sorrow of China', because due to the accumulation of deposits the bed of this river is raised above the level of the flood plain. Thus the river is liable to cause devastating floods. This river often changes its course at the time of flood.

3. Estuaries provide suitable sites for harbours.

Ans. Estuaries are often formed due to the scouring action of tides and currents keeping the channel relatively clear of sediments. As it is free from deposition, it provides an ideal site for harbours.

4. All rivers do not form deltas.

Ans. All rivers do not form deltas because it is necessary for the formation of delta that the river should bring a large amount of sediments and only a river actively eroding the upper parts of its course brings enough sediments to form a delta.

5. Deltas are extensively cultivated.

Ans. The deltas are extensively cultivated because they have rich alluvial soil and an abundant water supply from the river channels. Therefore they are very fertile areas.

6. Deposition is the chief activity of a river in the lower course.

Ans. Deposition is the chief activity of a river in the lower course because its velocity becomes very low due to which it is unable to carry the entire load.

III. Differentiate Between the Following [Analysis]

1. Physical weathering and Chemical weathering

Physical weathering	Chemical weathering

(i) Rock disintegration without any change in the chemical constituents of rocks takes place in this type of weathering.	(i) Minerals in rocks are dissolved or altered in this type of weathering.
(ii) Factors such as temperature, moisture and pressure cause physical break-up of rocks.	(ii) Temperature, moisture etc. cause minerals in rocks to dissolve or convert them into other minerals.

2. Oxidation and Carbonation

Oxidation	Carbonation
(i) This process takes place when the oxygen of the atmosphere combines with some other element of rock.	(i) This process takes place when the carbon dioxide combines with some other element of rock.
(ii) Common in rocks containing iron compounds.	(ii) Limestone is especially susceptible to this process.

3. Oxidation and Reduction

Oxidation	Reduction
(i) Union of atmospheric oxygen with the element of rock is known as oxidation.	(i) Loss of oxygen from the compound is known as reduction.
(ii) Example—formation of ferric oxidise.	(ii) Examples—Change of ferric compounds into ferrous compounds.

4. Gorges and Canyons

Gorges	Canyons
(i) Gorges are I-shaped.	(i) Canyons are narrow and steep-sided but not I-shaped.
(ii) They have a short length.	(ii) They have a long length.
(iii) These are formed in the areas of resistant rocks where the weathering is less effective on the valley slopes.	(iii) These are formed in arid regions where the sandy soils are quickly eroded by the river.

5. Meander and Ox-bow lake

Meander	Ox-bow lake
Due to obstruction in its path the river changes its direction and flows, making large curves. These bends in the course of the river are called meanders.	When the bends in the path of the river become acute and a river cuts through the narrow part separating the two meanders and attains a straight path an ox-bow Lake is formed.