

**SECTION 1 - SECTION 1**

**Question No.1**

Identify the country where mid-oceanic ridge is running almost in the middle part

- Madagascar
- Iceland
- Norway
- Greenland

**Question No.2**

Lopoliths are defined as

- Neither discordant nor concordant
- Concordant igneous bodies that occupy positions in the crests and troughs of the folds
- Concordant igneous bodies associated with natural basins, that is those sedimentary formations which are inclined towards a common centre
- Discordant bodies that cut across the regional structure very conspicuously

**Question No.3**

Slickensides are a type of

- Bedding
- Lineation
- Fault plane
- Foliation

**Question No.4**

The whole skeleton of a simple colony of graptolites is known as:

- Hierarchy
- Rhabdosome
- Phenotype
- Rhomboid

**Question No.5**

Ankaleshwar oil field in India is in the state of :

- Maharashtra

- Madhya Pradesh
- Gujarat
- Tamilnadu

**Question No.6**

98% of the annually produced coals in India comes from

- Cretaceous rocks
- Upper Gondwana Rocks
- Lower Gondwana rocks
- Tertiary sequence

**Question No.7**

Andesite line or the boundary that separates the regions of andesitic volcanism from basaltic volcanism is located around the

- Atlantic Ocean
- Mediterranean sea
- Indian Ocean
- Pacific Ocean

**Question No.8**

A portion of the plateau, separated from the main plateau is

- Inselberg
- Pediment
- Mesa
- Wadi

**Question No.9**

Pick-out the double carbonate mineral from the list given below:

- dolomite
- Aragonite
- Calcite
- Magnesite

**Question No.10**

The upper surface of water in a confined aquifer is called

- First layer
- Peizometric layer
- Primary layer

- Secondary layer

### Question No.11

Continental margin refers to

- the portion covered by continental slope and continental rise
- the oceanic part covered by continental shelf and continental slope
- Continental rise and mid-oceanic ridges
- the area covered by continental slope and abyssal floor

### Question No.12

Youngest oceanic crust is found near the/along the

- the subduction zones
- mid-oceanic ridge
- Island arcs
- Transform fault

### Question No.13

In parabolic dunes

- its horns point downwind
- one horn points leeward and another points upwind
- Its horns point upwind or windward side
- its horns point leeward side

### Question No.14

Sliding past of two Crustal Plates in opposite direction is known as

- Convergent Plate Movement
- Divergent Plate Movement
- Transform Plate Movement
- Boundary Plate Movement

### Question No.15

C.I.P.W classification of igneous rocks essentially deals with

- Chemical composition of igneous rocks alone
- Chemical and mineralogical composition of igneous rocks
- Textures of igneous rocks
- Mineralogical composition of igneous rocks alone

**Question No.16**

Changing of particles size during process of metamorphism is classified as

- bending
- bedding
- recrystallization
- folding

**Question No.17**

When the dip of a layer is measured in any other direction which is not at right angles to its strike direction, is called

- Secondary dip
- Primary dip
- apparent dip
- true dip

**Question No.18**

One of the drainage patterns which is not structurally controlled

- Radial Pattern
- Angulate pattern
- Trellis pattern
- Dendritic pattern

**Question No.19**

Concept of Isostasy is related to

- Equal balance
- Equal pressure
- Equal temperature
- Equal precipitation

**Question No.20**

The Isometric system is essentially characterised by:

- 4 axes of 3 fold symmetry
- 6 axes of 5 fold symmetry
- 3 axes of 4 fold symmetry
- 2 axes of 4 fold symmetry

**Question No.21**

Tethys sea was located between

- rifted continents of east Africa and West Africa
- rifted continents of Australia and Antarctica
- rifted continents of Europe and Africa
- rifted continents of Gondwanaland and Laurasia

**Question No.22**

During which geologic period did Archaeopteryx live?

- Triassic
- Permian
- Jurassic
- Cretaceous

**Question No.23**

A plot of rainfall versus time is known as:

- Hydrograph
- Mass curve
- Hyetograph
- Isohyets

**Question No.24**

Pyrolusite is a ore mineral of:

- Manganese
- Iron
- Copper
- Lead

**Question No.25**

The line of maximum curvature in a fold is known as:

- Hinge
- Axis
- Trough
- Crest

**Question No.26**

Hutti gold mines are located in which state of India?

- Sikkim
- Madhya Pradesh

- Bihar
- Karnataka

**Question No.27**

Interfacial angle of a crystal can be measured using

- Vernier Calliper
- Screw gauge
- Contact goniometer
- U-stage

**Question No.28**

One of the common forms of Orthorhombic system that shows an open form of two faces and each face is parallel to the brachy axis and meets the other two axes is known as

- Macroprism
- Macrodome
- Brachy pinacoid
- Brachydome

**Question No.29**

Identify the world's largest modern submarine fan.

- Bengal
- Nile
- La Jolla
- Amazon

**Question No.30**

The Mansar Formation, belongs to:

- Amgaon group
- Sakoli group
- Saucer group
- Chilpi group

**Question No.31**

In Panidiomorphic fabric, the crystal of the igneous rock show

- Crystals are of anhedral or irregular shapes
- majority of the crystals are in fully developed shapes
- majority of the crystals are mixtures of euhedral, subhedral and anhedral

- Crystals are of subhedral shape

### Question No.32

Tick the right statement from the list given below

- The salinity of the Arabian Sea is high due low rainfall
- The salinity of the Bay of Bengal surface water is comparatively less due to more influx of freshwater discharge compared to Arabian sea
- The salinity of the Bay of Bengal is less due to low level evaporation
- The salinity of the Arabian Sea is on higher side due to high evaporation compared to Bay of Bengal

### Question No.33

Viscosity of lava is determined by its \_\_\_\_\_ content

- Silica
- Iron
- Copper
- Zinc

### Question No.34

The most common ore of Zinc is

- Galena
- Chromite
- Bauxite
- Sphalerite

### Question No.35

Lamprophyres generally occur as:

- Batholiths
- Laccolith
- Plutons
- Dykes and sills

### Question No.36

A fault in an area may be observed

- with or without a relative displacement having taken place along its surface
- if some definite amount of relative displacement has taken place

- if a fracture opened up without a relative displacement
- if there is series of fractures in a rock mass

**Question No.37**

Eparchaeon unconformity is identified at the basal part of the

- Kurnool system
- Vindhyan system
- Cuddapah system
- Kaladgi sediments

**Question No.38**

Inlier structure is formed:

- When the older rocks surrounded by younger rocks
- When both older and younger rocks are surrounded by a ring dyke
- When both older and younger rocks are surrounded by a sill
- When the younger rocks surrounded by older rocks

**Question No.39**

Lysimeter is used to measure

- Evaporation
- Evapotranspiration
- Infiltration
- Vapour pressure

**Question No.40**

Batholiths are generally associated with:

- Folded structures
- Island arcs
- Earthquake zones
- Orogenic belts

**Question No.41**

Plagioclase feldspar isomorphous series is known as

- Orthoclase- Albite series
- Albite-Anorthite series
- Augite-Anorthite Series
- Albite-Bytownite series



**Question No.42**

The coarse-grained (plutonic) rock consisting primarily of sodic plagioclase and Hornblende is:

- Syenite
- Granite
- Diorite
- Gabbro

**Question No.43**

Chatter marks are the horse shoe like indentations on the polished rock surface left by the

- movement of water over rock surface
- mobile glaciers
- movement of wind ablation over the rock surface
- movement of turbidity currents

**Question No.44**

Characteristics of the Muth Quartzites are

- Unfossiliferous and found in northeast India
- Fossiliferous and found in Kutch area
- Marine sediments and richly fossiliferous with Cretaceous molluscs
- Unfossiliferous, Devonian in age and found in Kashmir and Spiti

**Question No.45**

A disconformity is

- a rock unit that does not contain fossils
- an erosional surface between horizontal sedimentary rocks
- an erosional surface between different rock types
- an erosional surface between igneous and metamorphic rocks

**Question No.46**

Geological time scale subdivisions starting with the largest is:

- Eras, eon, periods, epochs
- Epochs, periods, eras, eons
- Eons, periods, epochs, eras
- Eons, eras, periods, epoch

**Question No.47**

Identify the group of planets which are referred as Terrestrial Planets?

- Mars, Saturn, Uranus, and Neptune
- Jupiter, Saturn, Uranus , and Pluto
- Jupiter, Venus, Earth, and Mars
- Mercury, Venus, Earth, and Mars

**Question No.48**

Isoclinal folds are

- group of folds in which all the axial planes are essentially parallel meaning that all the component limbs are dipping at equal amounts
- folds with inclines axial planes in which both the limbs are dipping essentially in the same general direction
- types of overturned folds in which the axial plane assumes an almost horizontal attitude
- upright folds where the axial planes are essentially vertical

**Question No.49**

Dip of a bed is a vector quantity because it has got:

- Direction and magnitude
- Magnitude
- Thickness
- Direction

**Question No.50**

An unconformity is defined as

- an alternate layer of boulders or sandstone in a sequence of rocks
- a layer of shale deposit in a sequence of rocks
- a surface of erosion or non-deposition or both as inferred in a sequence of rocks
- a layer of sequence intruded by a pluton

**Question No.51**

Ventifacts are the stones with flat surfaces shaped by

- abrasion of ice
- abrasion of waves
- abrasion of water
- abrasion of wind

**Question No.52**

Wolframite is an ore of:

- Tungsten
- Vanadium
- Antimony
- Cobalt

**Question No.53**

Ophitic texture is commonly shown by:

- Dolerite
- Andesite
- Lamprophyres
- Trachyte

**Question No.54**

Slaty cleavage is best developed in rocks containing

- Ferruginous minerals
- Micaceous minerals
- Chloritic minerals
- Arenaceous minerals

**Question No.55**

Monazite sands of Kerala are rich in:

- thorium
- coal
- platinum
- uranium

**Question No.56**

A crystal form showing faces placed on two crystal of the same mineral in such a way that faces of one crystal become the mirror image of the form of faces on the other crystal may be defined as

- Enantiomorphous form
- Hemimorphic form
- Hemihedral form
- Open and closed form

**Question No.57**

The size of sand grains range from

- 2 to 1/16mm
- 2 to 1/256 mm
- 4 to 1/16 mm
- 2 to 4mm

**Question No.58**

Groundwater flow map is also known as:

- Isocontour map
- Flydraulic map
- Isopach map
- Potentiometric map

**Question No.59**

Which one of the following is most symmetrical?

- Monoclinic
- Triclinic
- Isometric
- Tetragonal

**Question No.60**

Artesian conditions occur in

- an unconfined aquifer, sequence must have closed-end and adequate rainfall
- a perched aquifer above the main body of groundwater
- clay lenses
- a confined aquifer, sequence must have open end to receive precipitation and adequate rainfall

**Question No.61**

Identify one of the false statements.

- Trenches are narrow and partially filled by sediments
- Deepest part of the ocean is found in deep-sea trenches
- Trenches are found only in the Pacific Ocean
- Challenger deep in the Mariana trench is the deepest part of the ocean in the Pacific

**Question No.62**

Cinnabar is an ore of:

- Iron
- Cesium
- Mercury
- Antimony

**Question No.63**

Current beddings are formed due to:

- Frequent changes in velocity and direction of the flow of the stream
- Frequent change in direction 'of the flow of the stream
- No changes in the velocity and direction of the flow of the stream
- Frequent changes in velocity of the flow of the stream

**Question No.64**

In limestone caverns, dripping of groundwater resulting in growing of a structure from the cave floor is termed as

- Terra Rosa
- Stalagmite
- Stalactite
- Pillars and columns

**Question No.65**

The present epoch in earth's age is known as:

- Holocene
- Pliocene
- Miocene
- Pleistocene

**Question No.66**

In Kanjamalai, Salem District, the important ore found as

- Magnetite Quartzite
- Bauxites
- Magnesite
- Hematite

**Question No.67**

The highest tide occurs in the ocean when

- moon and earth at right angles
- sun, earth, and moon are on the same line
- sun, earth and moon are not oriented in the same path
- sun and earth at right angles

**Question No.68**

Chalcopyrite is the chief ores of copper and mined commercially in

- Sukinda in Orissa state
- Ratnagiri district of Maharashtra
- Balaghat district of Madhya Pradesh
- Singhbhum district of Bihar (now Jharkhnad State)

**Question No.69**

The term watershed can be defined as

- a highland separating one drainage basin from the other
- small rivers going into a main stream
- the area or catchment area whose rainfall being drained into a river
- main river with its distributaries and tributaries

**Question No.70**

An imaginary plane passing through the centre of a crystal in such a way that it divides the crystal into exactly similar halves is called

- Centre of symmetry
- Binary symmetry
- An axis of symmetry
- A plane of symmetry

**Question No.71**

The most stable mineral to weathering is

- Amphibole
- Pyroxene
- Quartz
- Olivine

**Question No.72**

The degree of crystallization where the constituents are very fine or glassy

- Homocrystalline

- Holohyaline
- Homohyaline
- Holocrystalline

**Question No.73**

An incised water-worn channel, which is particularly common in semi-arid areas

- Terraces
- Gullies
- Meanders
- Pot holes

**Question No.74**

Water, oxygen, carbon dioxide, and acids are significant agents of

- chemical weathering
- mechanical weathering
- abrasion
- erosion

**Question No.75**

Which statement of the following is correct?

- Conglomerate has coarse grains, but breccias have medium size grains
- In conglomerate, the sedimentary particles are coarser and angular
- In breccias and conglomerates, sedimentary particles are coarse, but angular and rounded in shapes respectively
- In breccias the sedimentary particles are rounded in shape

**Question No.76**

Identify the group of minerals that shows phosphorescence property

- Fluorite, Quartz, Willemite, and Diamond
- Tourmaline, Quartz, Orthoclase and Almandine
- Actinolite, Natrolite, Stibnite, and Bronzite
- Staurolite, Witherite, Magnesite and Zeolite

**Question No.77**

Majority of the Iron formations formed in:

- Phanerozoic
- Precambrian
- Mesozoic
- Cenozoic

**Question No.78**

A Monoclinic unit cell satisfies which of the following equations?

- $a \neq b \neq c, \alpha \neq \beta = \gamma = 90 \text{ degree}$
- $a = b = c, \alpha = \beta = 90 \text{ degree} \neq \gamma$
- $a = b = c, \alpha \neq \beta = \gamma = 90 \text{ degree}$
- $a \neq b \neq c, \alpha \neq \beta \neq \gamma \neq 90 \text{ degree}$

**Question No.79**

Most of the bauxite deposits of central and western India have been formed from:

- Granite
- Basalt
- Syenite
- Nepheline syenite

**Question No.80**

Identify the group of climate indicators (rocks/minerals) of the past.

- Conglomerates, Phosphorites, Marble and Slates
- Laterites, Massive sandstones, Siltstones, and Shales
- Chalks, marbles, Bauxites, greywackes
- Red Beds, Evaporites, Coal, and Tillites

**Question No.81**

Triclinic unit cell satisfies which of the following equations?

- $a = b = c, \alpha \neq \beta = \gamma = 90 \text{ degree}$
- $a \neq b \neq c, \alpha \neq \beta \neq \gamma \neq 90 \text{ degree}$
- $a \neq b = c, \alpha = \beta = \gamma = 90 \text{ degree}$
- $a = b = c, \alpha = \beta = 90 \text{ degree} \neq \gamma$

**Question No.82**

The suitable conditions for the preservation of fossils are

- Organism deposited in the deep sea sediments in water depth exceeding 4500m
- slow burial within sediments, and organisms with soft parts



- Organisms with hard skeletal parts, quick burial within sediments and non-destructive chemical agents in the depositional site
- Continental environment and destructive chemical agents in the depositional site

**Question No.83**

Diamond occurs as dispersed crystals in

- Picrites
- Kimberlites
- Dunites
- Pegmatites

**Question No.84**

Raniganj coal field is in

- Bihar
- Orissa
- Jharkhand
- West Bengal

**Question No.85**

Benthonic foraminifera's were distributed all over the world during

- Cenozoic era
- Palaeozoic era
- Tertiary era
- Mesozoic era

**Question No.86**

The fresh water fossil is:

- Cerethium
- Physa
- Nucula
- Ammonite

**Question No.87**

The correct stratigraphic order of Jurassic of Kutch being

- Patcham, Chari, Katrol and Umia series
- Umia, Chari, Katrol and Patcham series
- Patcham, Chari, Umia and Katrol Series

- Patcham, Umia, Chari and Katrol Series

**Question No.88**

Water logged volcanic material flow in confined channels along the slope of a volcanic cone is termed as

- Scoria
- Lapilli
- Lahar
- Ignimbrites

**Question No.89**

Richter and Mercalli scales are used to measure the magnitude/intensity of

- Earth's heat flow
- Earth magnetism
- Earthquakes
- Earth resistivity

**Question No.90**

Plutonic Igneous rocks are formed under:

- Deep seated, high temperature pressure and slow cooling conditions
- Near the earth's surface and high temperature pressure conditions
- Deep seated and moderate temp-pressure conditions
- Deep seated high temperature pressure and fast cooling conditions

**Question No.91**

The mineral gypsum exhibits

- Multiple Twins
- Contact Twins
- Simple twins
- Penetration Twins

**Question No.92**

Which are the group of minerals belonging to monoclinic pyroxenes?

- Hornblende, Hedenbergite, Anthophyllite, and Enstatite
- Hypersthene, Actinolite, Tremolite and Glaucophane

- Diopside, Augite, Spodumene, and Jadite
- Enstatite, Hypersthene, Axinite and Gypsum

**Question No.93**

Residual hill in the desert is known as:

- Inlier
- Pediment
- Inselberg
- Playa

**Question No.94**

Most of the bauxite deposits of central and western India have been formed from:

- Basalt
- Nepheline syenite
- Granite
- Syenite

**Question No.95**

The exoskeleton of sponges is made of:

- Silica
- Aragonite
- Calcium phosphate
- Calcium

**Question No.96**

Storage capacity of a reservoir depends on

- Inter-connections
- Quality of solidity of rocks
- Porosity and permeability
- Porosity of rocks

**Question No.97**

A disconformity is:

- an erosional surface between different rock types
- an erosional surface between igneous and metamorphic rocks
- an erosional surface between horizontal sedimentary rocks
- a rock unit that does not contain fossils

**Question No.98**

Through which layer of the earth do P-waves travel fastest?

- Crust
- Outer core
- Inner core
- Lower mantle

**Question No.99**

Drag folds:

- Within the incompetent beds lying between competent beds
- Occur within the competent beds
- Within the competent beds
- When vertical stresses act on horizontal beds

**Question No.100**

Weichert Gutenberg discontinuity separates

- Core from Mantle
- Asthenosphere from Mesosphere
- Inner core from outer core
- Lower crust from Mantle