

Test Registration No. _____



The Maharaja Sayajirao University of Baroda
Faculty of Science

M.Sc. ENTRANCE EXAMINATION

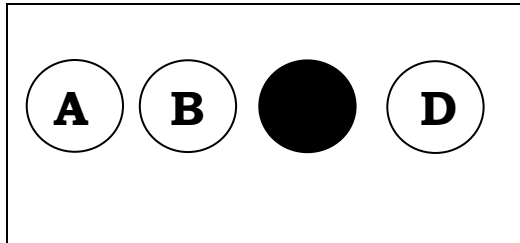
SUBJECT: GEOLOGY
DAY: TUESDAY

TIME : 02.30 PM - 04.30 PM
DATE: 05-07-2022

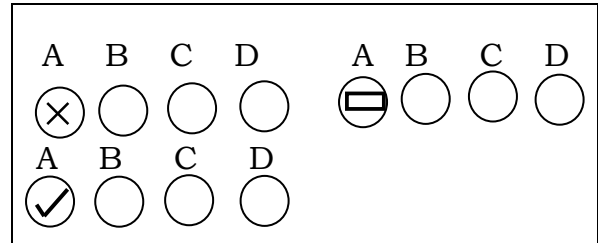
Important Instructions:

1. This test booklet is to be opened only when instructed by the invigilators to do so.
2. This booklet carries **100** questions in **24** printed pages. All carry equal marks.
3. For every correct answer, candidate will earn **1** mark, for every wrong answer **25%** mark will be deducted.
4. Test Registration Number must be entered correctly in the OMR answer sheet, as advised by the invigilators. The Question Booklet code (A/B/C/ D) must also be mentioned on the OMR answer sheet (if not printed already) as instructed.
5. Answers must be marked in the OMR answer sheet using a black or dark blue ball point pen only. The circle should be filled in completely, leaving no gaps.
6. Gadgets (Mobile phones, pagers, ear phones, music players, calculators, smart watches etc.) are strictly prohibited in the exam hall. If any candidate is found in possession of any of these at his/her exam seat, he/she is liable to be disqualified.
7. In case of tie in the marks the merit will be considered based on total marks in qualifying examination.

Correct way of marking answer:



Incorrect way of marking answer:



Invigilator's Signature: _____

1. Match the following

Earth system

(a) Geosphere

(b) Atmosphere

(c) Hydrosphere

(d) Biosphere

Related Processes

(i) Living organisms and it is intimately related to Earth system

(ii) Redistribute heat and moisture across the earth's surface

(iii) Weathering, erosion, transportation, tectonic

(iv) Water in its liquid, gaseous (vapour) and solid (ice) phases

(A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)

(B) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)

(C) (a) - (iii), (b) - (ii), (c) - (iv), (d) - (i)

(D) (a) - (iv), (b) - (i), (c) - (iii), (d) - (ii)

2.

3. Match the following

Stages of river

(a) Youth stage

(b) Mature stage

(c) Old stage

Landforms

(i) Floodplains oxbow lakes, natural levees and Delta

(ii) Gorges, canyons waterfalls, rapids and river capture

(iii) Meander and slip off slopes

(A) (a) - (i), (b) - (ii), (c) - (iii)

(B) (a) - (ii), (b) - (i), (c) - (iii)

(C) (a) - (ii), (b) - (iii), (c) - (i)

(D) (a) - (i), (b) - (iii), (c) - (ii)

4. Match the following

Glacial feature

(a) Drumlin

(b) Esker

(c) Moraines

Description

(i) Asymmetrical sediment hill pointing in the direction of ice movement

(ii) Winding ridge of sand and gravel deposited by a stream of meltwater

(iii) Linear unsorted deposits of rock

(A) (a) - (i), (b) - (ii), (c) - (iii)

(B) (a) - (iii), (b) - (i), (c) - (ii)

(C) (a) - (iii), (b) - (ii), (c) - (i)

(D) (a) - (i), (b) - (iii), (c) - (ii)

5.

6. Match the following

<u>Forms of Igneous rocks</u>	<u>Description</u>
(a) Batholith	(i) The greatest bodies of igneous rock known, frequently elongated parallel to the strike, having concordant habit
(b) Phacolith	(ii) Igneous material found within the crests and troughs in the folded terrain, exhibiting doubly-convex, lens-like features
(c) Lopolith	(iii) Basic rock having concordant, lenticular shape, and are centrally sunken like a saucer or basin
(d) Laccolith	(iv) A bun-shaped mass of igneous rock having a flat base and a domed top as a result of magma of considerable viscosity injected into stratified rocks

- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv) (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
(C) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii) (D) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)

7. Read the statements

- (a) Cross bedding and ripple marks are secondary structure
(b) Folds and faults are primary structure
(c) Cross bedding and ripple marks are primary structure
(d) Folds and faults are secondary structure

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

8. Match the following

<u>Types of fold</u>	<u>Interlimb angles</u>
(a) Open Fold	(i) Sub parallel limb
(b) Isoclinal Fold	(ii) 120°-70°
(c) Fan Fold	(iii) Negative

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

9. Match the following

Grain size in Phi

- (a) 1 to 0
- (b) 2 to 1
- (c) 3 to 2
- (d) 4 to 3

Grain size in microns

- (i) 62.5–125 μm
- (ii) 125–250 μm
- (iii) 250–500 μm
- (iv) 500–1000.00 μm

- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv) (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
(C) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii) (D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

10. Read the following statement

- (a) Western Himalayan syntaxis is at Hazara
- (b) Eastern Himalayan syntaxis is at Hazara
- (c) Western Himalayan syntaxis is at Namche Barwa
- (d) Eastern Himalayan syntaxis is at Namche Barwa

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

11. In the clastic rocks the shapes of the constituent fragments depend on the original shapes of the material supplied by weathering, and on the amount and kind of transportation it has suffered. If granite disintegrates,

- (a) Quartz will have sharply-angular fragments
- (b) Zircon and apatite may be liberated as perfectly-shaped crystals.
- (c) Quartz may be liberated as perfectly-shaped crystals
- (d) Zircon and apatite will have sharply-angular fragments

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

12. Match the following

Texture

- (a) Blastophitic
- (b) Blastopsephitic
- (c) Blastopsammitic
- (d) Blastopelitic

Description

- (i) Remnants of argillaceous rocks fragments are recognisable
- (ii) Remnants of arenaceous rocks fragments are recognisable
- (iii) Remnants of conglomerates and breccias fragments are recognisable
- (iv) Remnants of original ophitic textures are recognisable

- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv) (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
(C) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii) (D) (a)- (iv), (b) - (iii), (c) - (ii), (d) - (i)

13.

14. Arrange geological provinces and structural elements of Singhbhum craton from north to south:

- (a) Sukinda Thrust,
- (b) Singhbhum Iron Ore-Orissa Nucleus,
- (c) Singhbhum-Dhalbhum Mobile Belt,
- (d) Singhbhum Thrust

(A) (a), (b), (c), (d)

(B) (b), (c), (d), (a)

(C) (c), (d), (b), (a)

(D) (d), (a), (c), (b)

15. Read statement regarding metallic mineral resources from the deep seafloor

- (a) Polymetallic nodules (golf-to-tennis ball-size) of nickel, gold, Na-salt and carbon, in varying concentrations.
- (b) Polymetallic nodules (golf-to-tennis ball-size) of nickel, cobalt, iron and manganese in varying concentrations.
- (c) Polymetallic nodules precipitate from seawater over millions of years on sediment over vast abyssal plains.
- (d) Polymetallic nodules precipitate from seawater over millions of years on sediment over vast continental shelf region.

(A) Statement (a) and (b) are correct

(B) Statement (b) and (c) are correct

(C) Statement (c) and (d) are correct

(D) Statement (d) and (a) are correct

16. The most important geomorphic consideration for selection of a dam site are

- (a) Broad river valley section
- (b) Narrow river valley section
- (c) Height of the shoulder hills above the dam height
- (d) Height of the shoulder hills lower than the dam height

(A) Statement (a) and (b) are correct

(B) Statement (b) and (c) are correct

(C) Statement (c) and (d) are correct

(D) Statement (d) and (a) are correct

17. Match the following

Geological thermometers

Minerals

- | | |
|------------------------------|-------------------|
| (a) High Temperature | (i) Chalcedony |
| (b) Intermediate temperature | (ii) Arsenopyrite |
| (c) Low temperature | (iii) Tourmaline |

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

18. Fundamental concepts of Environmental Geology

- (a) Development should be in accordance to need of human beings
- (b) Growth in human population decrease the effects and demands on the environment
- (c) Economically viable development that do not harm the environment, and are socially just
- (d) Growth in human population increases the effects and demands on the environment

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

19. Match the Processes that lead to soil degradation

Processes

Consequences

- | | |
|----------------|---|
| (a) Biological | (i) Accelerated erosion, increasing wetness and poor drainage |
| (b) Chemical | (ii) Laterization, salinization, nutrient imbalance, decline in soil organic matter |
| (c) Physical | (iii) Reduction in activity and species activity of soil fauna and flora |

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

20. The hydrologic equation is a simple statement of the law of mass conservation

- (A) $\text{Inflow} = \text{Outflow} \pm \text{Changes in Storage}$
- (B) $\text{Inflow} = \text{Outflow} \times \text{Changes in Storage}$
- (C) $\text{Outflow} = \text{Inflow} \div \text{Changes in Storage}$
- (D) $\text{Outflow} = \text{Inflow} \times \text{Changes in Storage}$

21. Residual magnetic field over the Earth appears to shift _____

- (A) Eastward (B) Westward
(C) Northward (D) Southward

22. Match the following

- | | |
|---------------|--|
| (a) Aquifer | (i) Geological formation that does not store any water |
| (b) Aquitard | (ii) Geologic formation or stratum that confines water in an adjacent aquifer |
| (c) Aquiclude | (iii) Geological formation of semipervious nature that transmits water at slower rates than an aquifer |
| (d) Aquifuge | (iv) Geologic formation that yields appreciable quantities of water |

- (A) (a) - (i), (b) - (iv), (c) - (ii), (d) - (iii) (B) (a)- (iii), (b) - (ii), (c) - (iv), (d) - (i)
(C) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv) (D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

23. Match the following

- | <u>Path finder element</u> | <u>Deposits</u> |
|----------------------------|--|
| (a) Hg | (i) U, all types |
| (b) Rn | (ii) W-Sn contact metamorphic deposits |
| (c) Mo | (iii) Pb-Zn-Ag complex sulphide deposits |

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

24. In India, most of the Rare earth elements comes from mineral

- (A) Fluorapatite, from Carbonatite-alkaline rocks, Ambadonger, Gujarat
(B) Monazite, from Placer Beach Sand deposits, Chhatrapur, Orissa
(C) Pyrochlore, from Closepet Granites, Karnataka
(D) Zircon, from Banded Gneiss Complex, Rajasthan

25. The two processes that played significant role in the Solar Nebula are

- (a) Accretion resulted as dust grains collided to form clumps, larger bodies, of which some grew into planets
(b) Condensation produced solid dust grains as the gases in the Solar Nebula cool.
(c) Accretion produced solid dust grains as the gases in the Solar Nebula cool.
(d) Condensation resulted as dust grains collided to form clumps, larger bodies, of which some grew into planets

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

26. Continental drift has influence distribution of flora and fauna by

- (A) Decreasing diversity (B) Dispersal across continents.
(C) Creating barriers to their dispersal (D) Increasing diversity and isolation

27. Arrange the following minerals in order of increasing depth in to the Earth's Interior.

- (a) Olivine
(b) Perovskite
(c) Spinel
(d) Wadsleyite.

- (A) (a) - (b) - (c) - (d) (B) (a) - (d) - (c) - (b)
(C) (a) - (c) - (d) - (b) (D) (a) - (b) - (d) - (c)

28. Match the following:

<u>Explanation</u>	<u>Orbital parameters</u>
(a) The tilt of the earth axis to the Ecliptic Plane of Earth's Orbit	(i) Obliquity
(b) The Sun's departure from the Geometric Center of the Earth's Orbit.	(ii) Precession
(c) Motion of the equinoxes along the ecliptic plane of the Earth's orbit	(iii) Eccentricity

- (A) (a) - (i), (b) - (ii), and (c) - (iii). (B) (a) - (ii), (b) - (iii), and (c) - (i)
(C) (a) - (iii), (b) - (i), and (c) - (ii) (D) (a) - (i), (b) - (iii), and (c) - (ii)

29. Describe holding position for crystal belonging to Triclinic system

- (a) 100 face is inclined towards observer and to his right
(b) 001 face is inclined towards observer and to his right
(c) 001 face is inclined towards observer
(d) 100 face is inclined towards observer

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

30. Read the statements for equigranular textures in igneous rocks

- (a) Allotriomorphic most of the minerals are subhedral
(b) Allotriomorphic most of the crystals are anhedral
(c) Hypidiomorphic most of the minerals are subhedral
(d) Hypidiomorphic most of the crystals are anhedral

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

31. Match the following

Origin

- (a) Arenaceous Rocks
- (b) Chemical Rocks
- (c) Organic Rocks

Examples

- (i) Flint and chert
- (ii) Phosphorites and guano
- (iii) Graywacke

(A) (a) - (i), (b) - (ii), (c) - (iii)

(B) (a) - (iii), (b) - (i), (c) - (ii)

(C) (a) - (iii), (b) - (ii), (c) - (i)

(D) (a) - (ii), (b) - (i), (c) - (iii)

32. A Shale consisting of quartz, white mica, chlorite, hydrated silicates of alumina, and amorphous iron oxides, will form

- (a) Hornfels under contact metamorphism
- (b) Garnetiferous mica schist, under dynamic metamorphism
- (c) Hornfels under dynamic metamorphism
- (d) Garnetiferous mica schist under contact metamorphism

(A) Statement (a) and (b) are correct

(B) Statement (b) and (c) are correct

(C) Statement (c) and (d) are correct

(D) Statement (d) and (a) are correct

33. What does one understand by 'Stress' and 'Strain'

- (a) Stress is force per unit area
- (b) Strain is response of Stress in the formation of deformation
- (c) Stress is response of Strain in the formation of deformation
- (d) Strain is force per unit area

(A) Statement (a) and (b) are correct

(B) Statement (b) and (c) are correct

(C) Statement (c) and (d) are correct

(D) Statement (d) and (a) are correct

34. Match the following

Invertebrates

- (a) Cephalopods
- (b) Brachiopods
- (c) Pelecypods
- (d) Trilobites

Description

- (i) Marine arthropods
- (ii) Bilaterally symmetrical, equivalved are often elongated in the anteroposterior direction as left and right valves
- (iii) Exclusively marine solitary organisms that live on the ocean floor, inhabiting a wide range of water depths from very shallow waters of rocky shorelines to ocean floors
- (iv) Bilaterally symmetrical swimming marine carnivore molluscs

(A) (a) - (i), (b) - (iii), (c) - (iv), (d) - (ii)

(B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)

(C) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv)

(D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

35.

36. As Earth rotates, circulating air is deflected resulting in curved paths. This deflection is called the Coriolis effect.

- (a) In the Northern Hemisphere the air deflects toward the left
- (b) In the Southern Hemisphere, the air deflects toward the right
- (c) In the Northern Hemisphere the air deflects toward the right
- (d) In the Southern Hemisphere, the air deflects toward the left

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

37. Read the statements

- (a) The P- waves can only pass through the medium with zero rigidity
- (b) The P- waves can pass through a rigid medium as well as medium with zero rigidity.
- (c) The S- waves do not pass through the medium with zero rigidity
- (d) The P and S waves pass through the medium with zero rigidity

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

38. Match the following

Iron ores

- (a) Banded iron ores
- (b) Apatite-magnetite ores
- (c) Limonitic or sideritic ore.
- (d) Lateritic iron-ores

Area /Association

- (i) Bailadila range
- (ii) Barren Measures
- (iii) Eastern and Western Ghats,
- (iv) Singhbhum shear zone

- (A) (a) - (i), (b) - (iv), (c) - (ii), (d) - (iii) (B) (a)- (iii), (b) - (ii), (c) - (iv), (d) - (i)
(C) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv) (D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

39. Ekman transport is

- (a) The movement of water is at an angle of 40 degree to the direction of the prevailing winds
- (b) The horizontal mass transport associated with a wind stress applied on the ocean surface
- (c) The movement of water is at right angles to the direction of the prevailing winds
- (d) The vertical mass transport associated with a wind stress applied on the ocean surface

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

40. Match the following

Boundaries

- (a) Low Velocity zone
- (b) 410 Km discontinuity
- (c) 660 Km discontinuity

Mineral Transformation

- (i) Olivine to β Phase Olivine to Spinel structure
- (ii) Spinel to Perovskite + Periclase
- (iii) 1% incipient melting

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

41. An important concept behind environmental impact analysis is to

- (A) Draw out Environmental law (B) Mitigation
(C) Carry out Land use planning (D) Announce negative declarations

42. Read the statement

- (a) An early magmatic process where disseminated crystallization take place without concentration is referred to as Segregation
- (b) An early magmatic process where crystallization differentiation and accumulation occurs is referred to as Segregation
- (c) An early magmatic process where disseminated crystallization without concentration is referred to as Dissemination
- (d) An early magmatic process where crystallization differentiation and accumulation occurs is referred to as Dissemination

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

43. Ediacara macro fossil Dickinsonia, 17 inches long, dated back to 570 million years is one of the rarest is discovered from

- (A) Bagh caves, 150 km south west of Indore, Madhya Pradesh
- (B) Bhimbetka rock shelters, a UNESCO site about 40km from Bhopal, Madhya Pradesh
- (C) Champaner rock shelters, a UNESCO site about 55 km from Vadodara, Gujarat
- (D) Lime stone caves, 55 km from Bangalore towards Kurnool, Karnataka

44. Which of the following is the cause of Melanornia (skin cancer)?

- (A) Acid rain
(B) Allergens
(C) Ozone depletion
(D) Air pollution

45. Match the following

<u>Type of Dam</u>	<u>Description</u>
(a) Gravity Dam	(i) A rigid monolithic structure made of either masonry or concrete with dam axis either straight or upstream curved or in combination
(b) Arch Dam	(ii) Build is area where thrust force of water is very high and it needs to be transferred towards abutments apart from foundation.
(c) Embankment Dam	(iii) Build is area where founding rocks are very weak or the river valley is very broad the earth used should be strong enough to resist shear failure and impervious

- (A) (a) - (i), (b) - (ii), (c) - (iii)
(B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i)
(D) (a) - (ii), (b) - (i), (c) - (iii)

46. Arrange the exploration stages for development of mine

- (a) Conceptual studies,
(b) Feasibility Studies
(c) Resource definition
(d) Resource evaluation
(e) Target drilling
(f) Target generation,

- (A) (a) - (b) - (c) - (d) - (e) - (f)
(B) (a) - (d) - (c) - (b) - (f) - (e)
(C) (a) - (f) - (e) - (d) - (c) - (b)
(D) (f) - (b) - (d) - (e) - (a) - (c)

47. Read the statements

- (a) The deviation of the magnetic meridian from the geographical meridian is called the magnetic declination
(b) The deviation of a magnetized needle in a non-horizontal attitude is called magnetic inclination
(c) The deviation of the magnetic meridian from the geographical meridian is called the magnetic inclination
(d) The deviation of a magnetized needle in a non-horizontal attitude is called magnetic declination

- (A) Statement (a) and (b) are correct
(B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct
(D) Statement (d) and (a) are correct

48. Match the Following

Cratons

- (a) Aravalli & Bundelkhand
- (b) Bhandara & Eastern Dharwar
- (c) Singhbhum & Bhandara
- (d) Singhbhum & Eastern Ghats

Dividing Structure

- (i) Mahanadi Lineament Fault
- (ii) Great Boundary Fault
- (iii) Godavari Lineament
- (iv) Sukinda Fault

- (A) (a) - (i), (b) - (iii), (c) - (iv), (d) - (ii)
- (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
- (C) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv)
- (D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

49. Trilobite has long geological record

- (a) Trilobites appeared in late Cambrian
- (b) Trilobites appeared in early Cambrian
- (c) Trilobites got extinct during late Permian
- (d) Trilobites got extinct during early Ordovician

- (A) Statement (a) and (b) are correct
- (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct
- (D) Statement (d) and (a) are correct

50. Consider Earth's orbit around the sun are evaluate correct statements

- (a) June 21: N-pole inclined AWAY FROM Sun (Direct sunlight reaches Antarctica)
- (b) Dec 21: N-pole inclined TOWARDS Sun (Direct sunlight reaches Arctic)
- (c) June 21: N-pole inclined TOWARDS Sun (Direct sunlight reaches Arctic)
- (d) Dec 21: N-pole inclined AWAY FROM Sun (Direct sunlight reaches Antarctica)

- (A) Statement (a) and (b) are correct
- (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct
- (D) Statement (d) and (a) are correct

51. Match the following

Weathering type

- (a) Biological
- (b) Chemical
- (c) Physical

Processes

- (i) Abrasion, exfoliation, frost wedging, salt crystallization, thermal expansion
- (ii) Carbonation, hydrolysis, oxidation, acidification
- (iii) Lichens and root wedging

- (A) (a) - (i), (b) - (ii), (c) - (iii)
- (B) (a) - (iii), (b) - (i), (c) - (ii)
- (C) (a) - (iii), (b) - (ii), (c) - (i)
- (D) (a) - (i), (b) - (iii), (c) - (ii)

52. Match the Following

<u>Minerals</u>	<u>Name of Classes</u>
(a) Calcite	(i) Hexoctahedral
(b) Fluorite	(ii) Rhombic –dipyramidal
(c) Gypsum	(iii) Prismatic
(d) Olivine	(iv) Hexagonal-scalenohedral

- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv) (B) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv)
 (C) (a)- (iii), (b) - (iv), (c) - (ii), (d) - (i) (D) (a) - (iv), (b) - (i), (c) - (iii), (d) - (ii)

53. Read the statements for Inequigranular Texture in igneous rocks

- (a) Porphyritic texture, smaller crystals are enclosed in the larger ones, without common orientation
 (b) Poikilitic texture, larger crystals are enveloped by groundmass /smaller crystals
 (c) Porphyritic texture, larger crystals are enveloped by groundmass /smaller crystals
 (d) Poikilitic texture, smaller crystals are enclosed in the larger ones, without common orientation

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
 (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

54. Match the following

<u>Sedimentary Process</u>	<u>Description</u>
(a) Welding	(i) Parallel bands due to differences of composition, texture, hardness, cohesion, or colour
(b) Cementation	(ii) Particles are bound together by the deposition of cementing substances between the grains.
(c) Stratification	(iii) Consolidation by pressure due either to the weight of super- incumbent material or earth movement.

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
 (C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

55. Which of the following is the main reason for producing the atmospheric greenhouse effect?

- (A) Absorption and re-emission of ultraviolet radiations by the atmosphere
 (B) Absorption and re-emission of infrared radiations by the atmosphere
 (C) Absorption and re-emission of visible light by the atmosphere
 (D) Absorption and re-emission of visible light and ultraviolet radiations by the atmosphere

56. Which of the following gas is present in the air in maximum amount?

- (A) Nitrogen (B) Oxygen
 (C) Carbon dioxide (D) Methane

57. Match the following

<u>Structures</u>	<u>Description</u>
(a) Cataclastic structures	(i) Forms a composite structure due to the alternation of schistose and granulose bands and lenticles, which are dissimilar both in mineral composition and in texture.
(b) Maculose structure	(ii) Comprises of the broken and fragmented rocks developed by shearing stress upon hard, brittle materials where little new mineral formation takes place
(c) Granulose structure	(iii) Comprises of porphyroblasts of strong minerals where spotting appears as the result of incipient crystallisation of minerals occur
(d) Gneissose structure	(iv) Predominance of equidimensional minerals, in a metamorphic rock. The cleavable lamellar or rod-like minerals are either absent or in subordinate amount

- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv) (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
 (C) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii) (D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

58. Bivalves and Brachiopods can be differentiated on the basis of

- (a) Brachiopods have two valves arranged left and right in position where each valve is a mirror image of the other
- (b) Bivalves have two valves referred as pedicle and brachial that are ventral and dorsal in position, respectively. Pedicle valve is bigger than the brachial valve
- (c) Brachiopods have two valves referred as pedicle and brachial that are ventral and dorsal in position, respectively. Pedicle valve is bigger than the brachial valve
- (d) Bivalves have two valves arranged left and right in position where each valve is a mirror image of the other

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
 (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

59. Read the statements

- (a) Aravalli has wide spread development of Stromatolites and Phosphorites.
- (b) BIF is well developed in Aravalli Craton
- (c) The Dharwar, Singhbhum and Bhandara cratons have large deposits of Phosphorites.
- (d) The Dharwar, Singhbhum and Bhandara cratons have large deposits of BIF

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
 (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

60. Read the statements

- (a) La Niña is present as of mid-May 2022
- (b) Surface temperatures is cooler-than-average in Equatorial Pacific Ocean

- (A) Statement (a) stand independently (B) Statement (a) is the cause for statement (b)
- (C) Statement (b) stand independently (D) Statement (b) is the cause for statement (a)

61.

62. Match the following

Mode of formation of mineralisation

Deposits

- | | |
|--|---|
| (a) Crystallization of magma chamber | (i) Fumarolic incrustation of base- metal sulphides |
| (b) Evaporation and supersaturation | (ii) Native sulphur |
| (c) Sublimation | (iii) Salt deposits |
| (d) Reaction of gases with other gases | (iv) Chromite liquids and solids |

- | | |
|--|--|
| (A) (a) - (i), (b) - (iv), (c) - (ii), (d) - (iii) | (B) (a)- (iii), (b) - (ii), (c) - (iv), (d) - (i) |
| (C) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv) | (D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i) |

63. Read statements related to karst landscapes

- (a) Caves, springs, disappearing streams, dry valleys, and sinkholes
- (b) Topography formed from the dissolution of soluble rocks such as limestone, dolomite, and gypsum.
- (c) Stalactite, stalagmite, Mushroom Rocks sinkholes, deflation hollows, and caves,
- (d) Topography formed from the deposition of sediment above soluble rocks such as limestone, dolomite, and gypsum

- | | |
|---------------------------------------|---------------------------------------|
| (A) Statement (a) and (b) are correct | (B) Statement (b) and (c) are correct |
| (C) Statement (c) and (d) are correct | (D) Statement (d) and (a) are correct |

64. NNE-SSW trending lineament, 'the Albite line', extending for 170 km long, from the Khetri Copper Belt to the Dudu-Kishangarh sector is known for

- (A) Uranium mineralisation (B) Pb-Zn mineralisation
(C) Gold mineralisation (D) Manganese mineralisation

65. Match the following

Cleavage angle

Mineral Group

- (a) 124° & 56° (i) Inosilicate (single chain)
(b) 120° & 60° (ii) Inosilicate (double chain)
(c) 93° & 87° (iii) Carbonate
(d) No cleavage (iv) Quartz

- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv) (B) (a)- (ii), (b) - (iii), (c) - (i), (d) - (iv)
(C) (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii) (D) (a) - (ii), (b) - (i), (c) - (iv), (d) - (iii)

66. In the proposed tabular classification of igneous rocks

- (a) The horizontal variation in table is based on principle of silica saturation
(b) The vertical variation in table is based on the geological occurrence of the igneous body
(c) The horizontal variation in table is based on the geological occurrence of igneous body
(d) The vertical variation in table is based on principle of silica saturation

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

67. Greisening is a process of metasomatic alteration due to

- (A) Combined action of water, silica, and halides
(B) Action of superheated steam and fluorine
(C) Combined action of water, boron, and fluorine
(D) Superheated steam aided by a little fluorine and boron.

68. Bromoform with specific gravity 2.8 is used for separation of the light and heavy mineral fraction present within sands

- (a) Quartz - felspar fragments float,
(b) Zircon - rutile fragments float
(c) Quartz - felspar fragments sinks,
(d) Zircon - rutile fragments sink

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

69. There were significant catastrophes in the history of foraminifera life
- (a) The Permian extinction decimated the planktic foraminifera.
 - (b) The Permian extinction removed half of the benthic foraminifera
 - (c) The Cretaceous extinction decimated the planktic foraminifera.
 - (d) The Cretaceous extinction removed half of the benthic foraminifera
- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
 (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

70. Arrange in order of their appearance in geological history in Kachchh Basin:
- (a) Jhuran formation,
 - (b) Jhurio formation,
 - (c) Jhumara formation,
 - (d) Bhuj formation
- (A) (a), (b), (c), (d) (B) (b), (c), (d), (a)
 (C) (c), (d), (b), (a) (D) (d), (a), (c), (b)

71. Read the statements concerning sources and sinks of carbon
- (a) The key sources of carbon are plants, the ocean and soil.
 - (b) The key sources of carbon are burning of fossil fuels, forest fires, animal respiration, and plant degradation
 - (c) The main natural carbon sinks are plants, the ocean and soil.
 - (d) The main natural carbon sinks are burning of fossil fuels, forest fires, animal respiration, and plant degradation
- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
 (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

72. Match the following

<u>Material</u>	<u>Spectral reflectance of the incident energy</u>
(a) Vegetation	(i) 10%
(b) Soils	(ii) 30–40%
(c) Water	(iii) 50%

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
 (C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

73. Match the following

<u>Test on site</u>	<u>Description</u>
(a) Jack Test	(i) To determine deformation characteristics of site rock.
(b) Shear Test	(ii) To determine shear strength of site rock
(c) Seismic Test	(iii) To determine in-situ deformation characteristics of site rock.

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

74. Match the following

<u>Type of Porosity</u>	<u>Description</u>
(a) Primary porosity	(i) Ground water can be found in fractured rocks
(b) Secondary porosity	(ii) Ground water within the pores between grains
(c) Effective porosity	(iii) Porosity available for fluid flow

- (A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
(C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

75. Plot of stress values vs strain values provides a line or curve showing elastic behaviour of rock. The slope of a line drawn from the point of origin or zero load as a tangent to this curve

- (a) Coefficient of Softening
(b) Modulus of elasticity
(c) Coefficient of Softening is determined by law of Gravity
(d) Modulus of elasticity is determined by Hooke's law

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

76. 'Meghalayan Stage' currently a formally defined geological unit within the Geological Time Scale has its Global Stratotype Section and Point at 'Mawmluh Cave', Meghalaya, northeast India 'Meghalayan Stage' represents

- (A) 4250 years before year 2000 (B) 8236 years before year 2000
(C) 11,700 years before year 2000 (D) 125,000 years before year 2000

77. The felspar grains frequently show a greater degree of rounding than quartz.

- (A) Felspar is heavier than Quartz (B) Felspar is softer than Quartz
(C) Felspar is lighter than Quartz (D) Felspar is harder than Quartz

78. Match the following

Type of Oxides

- (a) XO
- (b) X₂O
- (c) XO₂
- (d) X₂O₃

Examples

- (i) Cuprite
- (ii) Hematite
- (iii) Periclase
- (iv) Rutile

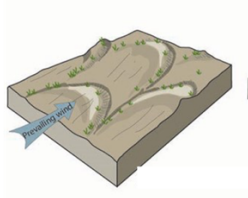
- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)
- (C) (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii)

- (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
- (D) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)

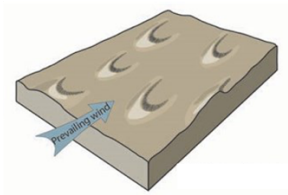
79. Match the following

Sketch

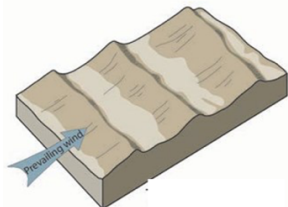
(a)



(b)



(c)



Dune Types

(i) Parabolic Dunes

(ii) Barchan Dunes

(iii) Transverse Dunes

- (A) (a) - (i), (b) - (ii), (c) - (iii)
- (C) (a) - (iii), (b) - (ii), (c) - (i)

- (B) (a) - (iii), (b) - (i), (c) - (ii)
- (D) (a) - (ii), (b) - (i), (c) - (iii)

80.

81. Bowen proposes propose two series namely, a continuous reaction series and a discontinuous reaction series.

- (a) Calc-alkali-plagioclase, Calcic plagioclase, Alkali-plagioclase, Alkali-calc-plagioclase.
- (b) Olivine, Ca-Pyroxene, Amphibole, Biotite, Mg-Pyroxene
- (c) Calcic plagioclase, Calc-alkali-plagioclase, Alkali-calc-plagioclase, Alkali-plagioclase
- (d) Olivine, Mg-Pyroxene, Ca-Pyroxene, Amphibole, Biotite

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

82. Match the following

<u>Rocks</u>	<u>Description</u>
(a) Anorthosite	(i) Predominance of lime soda plagioclase felspar
(b) Dacite	(ii) Predominance of plagioclase felspar
(c) Nepheline Syenite	(iii) Predominance of felspar and feldspathoid
(d) Trachyte	(iv) Predominance of alkali felspar

- (A) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv) (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
- (C) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii) (D) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)

83. Match the following

<u>Metamorphic rock</u>	<u>Protolith</u>
(a) Amphibolites	(i) Basalts and gabbro
(b) Skarns	(ii) Quartz arenites and cherts
(c) Soapstones	(iii) limestones or dolostones
(d) Quartzites	(iv) Peridotites, dunites, and pyroxenites

- (A) (a) - (i), (b) - (iii), (c) - (iv), (d) - (ii) (B) (a)- (ii), (b) - (iii), (c) - (iv), (d) - (i)
- (C) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv) (D) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

84. True dip of a bedding plane refers to

- (a) Maximum angle measured at right angle to the strike of a rock bed
- (b) Any other angle measured on a rock bed
- (c) True dip are multiple value for the bedding plane
- (d) True dip is single value for the bedding plane

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

85. Layer 2C of Oceanic crust comprises of Oceanic sediment comprises of _____

- (A) Massive basalt with dykes (B) Serpentinized Ultramafics
- (C) Dykes with Massive basalt (D) Meta-gabbro and Gabbro

86. Read the statements

- (a) Schistosity and mineral lineation are nonpenetrative structures
- (b) Schistosity and mineral lineation are penetrative structures
- (c) Slickensides and striations are nonpenetrative structure
- (d) Slickensides and striations are penetrative structure

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

87. Choose the correct order of index mineral in order of their appearance from low grade to high grade metamorphism

- (A) Biotite, chlorite, garnet, kyanite, staurolite, and sillimanite
- (B) Chlorite, biotite, garnet, staurolite, kyanite, and sillimanite
- (C) Garnet, kyanite, staurolite, sillimanite, biotite, and chlorite
- (D) Sillimanite, staurolite, garnet, chlorite, biotite, and kyanite

88. Read the statements

- (a) If one walk in the direction of dip of a bed one gets older rocks
- (b) If one walk in the direction of dip of a bed one gets younger rocks
- (c) If one walk in the direction of strike of a bed one gets same type of rocks
- (d) If one walk in the direction of strike of a bed one gets different type of rocks

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

89. Gastropods first appeared in the early Cambrian underwent phases of diversification:

- (a) First phase of diversification occurred during the Ordovician developing siphonotomatous forms and became abundant in the late Jurassic.
- (b) Second phase of diversification resulted in Triassic by colonised in the sea water, freshwater and land during the Carboniferous.
- (c) First phase of diversification occurred during the Ordovician by colonised in the sea water, freshwater and land during the Carboniferous.
- (d) Second phase of diversification resulted in Triassic by developing siphonotomatous forms and became abundant in the late Jurassic.

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

90. The magnitude of the Bhuj earthquake that occurred on 26 January 2001 was measured

- (A) 7.9 on Richter-Scale (B) 6.9 on Richter-Scale
- (C) 5.9 on Richter-Scale (D) 4.9 on Richter-Scale

91. Read the statements

- (a) At the equator, divergent currents causes deeper water to upwell
- (b) At mid latitudes around 30 degrees north and south, convergent currents causes downwelling
- (c) At the equator, divergent currents causes deeper water to upwell
- (d) At mid latitudes around 30 degrees north and south, convergent currents causes downwelling

- (A) Statement (a) and (b) are correct
- (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct
- (D) Statement (d) and (a) are correct

92. Match the following

Type of Hydrothermal deposits

- (a) Hypothermal
- (b) Epithermal
- (c) Telethermal

Conditions

- (i) Low Pressure and temperature
- (ii) Very shallow depths, temperature around 100-200°C
- (iii) Greater depths, High pressure temperatures around 300-500 °C

- (A) (a) - (i), (b) - (ii), (c) - (iii)
- (B) (a) - (iii), (b) - (i), (c) - (ii)
- (C) (a) - (iii), (b) - (ii), (c) - (i)
- (D) (a) - (ii), (b) - (i), (c) - (iii)

93. Condition for good Supergene Sulphide deposits prerequisites are

- (a) Presence of favour Precipitants below the ground water table
- (b) Suitable original sulphide mineral in rock and thick zone of reduction
- (c) Presence of favour precipitants above the ground water table
- (d) Suitable original sulphide mineral in rock and thick zone of oxidation

- (A) Statement (a) and (b) are correct
- (B) Statement (b) and (c) are correct
- (C) Statement (c) and (d) are correct
- (D) Statement (d) and (a) are correct

94. Match the following

Tunnel Types

- (a) Transport tunnels in soil
- (b) Transport tunnels in rocks
- (c) Water carrying tunnels

Design

- (i) Arch or horseshoe shaped sections.
- (ii) Circular section.
- (iii) Square sections

- (A) (a) - (i), (b) - (ii), (c) - (iii)
- (B) (a) - (iii), (b) - (i), (c) - (ii)
- (C) (a) - (iii), (b) - (ii), (c) - (i)
- (D) (a) - (ii), (b) - (i), (c) - (iii)

95. Thumb rules for a fault associated with epigenetic mineralisation are
- (a) For normal faults, the long axes of dilation zones (ore shoots) will tend to be sub-horizontal and to lie within portions of the fault that are steeper dipping than the rest of the fault
 - (b) For thrust and reverse faults, the principal dimension of dilation zones (ore shoots) will tend to be sub-horizontal and lie within shallower dipping portions of the fault than the main fault plane
 - (c) For thrust and reverse faults, the long axes of dilation zones (ore shoots) will tend to be sub-horizontal and to lie within portions of the fault that are steeper dipping than the rest of the fault
 - (d) For normal faults, the principal dimension of dilation zones (ore shoots) will tend to be sub-horizontal and lie within shallower dipping portions of the fault than the main fault plane
- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
 (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

96. Darcy's law explains the relationship between flux of water (v) through a saturated porous media for a given length (ΔL), under influence of a given head loss (Δh) as
- (a) Directly proportional to the length of the flow path (ΔL)
 - (b) Directly proportional to the head loss (Δh) and
 - (c) Inversely proportional to the length of the flow path (ΔL)
 - (d) Inversely proportional to the head loss (Δh) and
- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
 (C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

97. Match the following

<u>Type of Orbits for Satellites</u>	<u>Description</u>
(a) Polar orbit	(i) Highly inclined orbit, enables to observe whole globe and poles, placed at 600 km to 1000 km altitude
(b) Sun-synchronous orbit.	(ii) Crosses the equator at same time (mid-morning at around 10:30 hour local solar time). low Sun angle provides good terrain relief.
(c) Geostationary orbit.	(iii) Orbits where the satellite is placed above the equator at an altitude of about 36,000 km where orbital period of the satellite is equal to the rotational period of the Earth. Used for meteorological and telecommunication satellites

(A) (a) - (i), (b) - (ii), (c) - (iii) (B) (a) - (iii), (b) - (i), (c) - (ii)
 (C) (a) - (iii), (b) - (ii), (c) - (i) (D) (a) - (ii), (b) - (i), (c) - (iii)

98. Capillary rise of water depends on

- (a) For the rise of water through capillary action surface tension of water and weight of water raised need not be at equilibrium
- (b) Thickness of capillary zone is directly proportional to the pore size of soil or rock.
- (c) For the rise of water through capillary action surface tension of water and weight of water raised be at equilibrium
- (d) Thickness of capillary zone is inversely proportional to the pore size of soil or rock.

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

99. Gravity measurements using ground-based gravimeters defines anomalous density

- (a) Positive gravity anomaly yields chromite, and hematite mineralisation
- (b) Negative gravity anomaly yields halite, weathered kimberlite, and diatomaceous earth deposits
- (c) Positive gravity anomaly yields halite, weathered kimberlite, and diatomaceous earth deposits
- (d) Negative gravity anomaly yields chromite, and hematite mineralisation

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

100. The tsunami that caused devastation in Andaman and Nicobar Islands, the states of Andhra Pradesh, Kerala and Tamil Nadu and union territory (UT) of Pondicherry on 26 December 2004 was the consequence of

- (a) Tropical storm originated from Bay of Bengal
- (b) Tropical storm was due El' Nino condition persisting in ocean north of Australia
- (c) Earthquake of magnitude of 9.1–9.3 recorded on moment magnitude scale
- (d) Earthquake was due to rupture along the fault between the Burma Plate and the Indian Plate

- (A) Statement (a) and (b) are correct (B) Statement (b) and (c) are correct
(C) Statement (c) and (d) are correct (D) Statement (d) and (a) are correct

ANSWERS

Q.	1		3	4		6	7	8	9	10
Ans	C		C	A		A	C	D	A	D
Q.	11	12		14	15	16	17	18	19	20
Ans	A	D		C	B	B	C	C	C	A
Q.	21	22	23	24	25	26	27	28	29	30
Ans	B	D	B	B	A	C	B	D	B	B
Q.	31	32	33	34		36	37	38	39	40
Ans	B	A	A	D		C	B	A	B	B
Q.	41	42	43	44	45	46	47	48	49	50
Ans	B	B	B	C	A	C	A	C	B	C
Q.	51	52	53	54	55	56	57	58	59	60
Ans	C	D	C	C	B	A	B	C	D	D
Q.		62	63	64	65	66	67	68	69	70
Ans		D	A	A	B	A	B	D	B	A
Q.	71	72	73	74	75	76	77	78	79	
Ans	B	C	C	D	D	A	B	C	A	
Q.	81	82	83	84	85	86	87	88	89	90
Ans	C	A	A	D	C	B	B	B	C	B
Q.	91	92	93	94	95	96	97	98	99	100
Ans	D	C	D	B	A	B	A	C	A	C