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for

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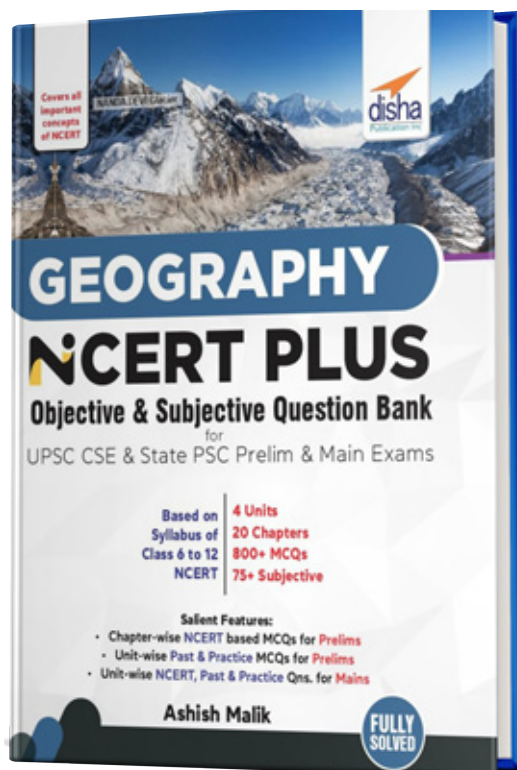
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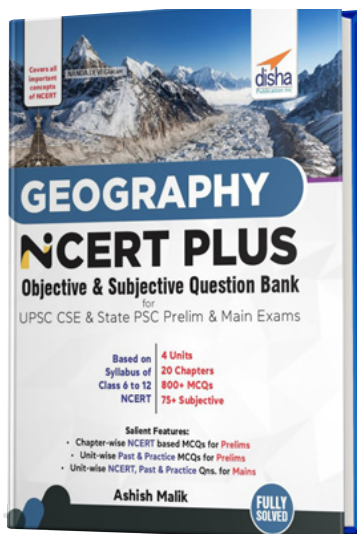
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NCERT Based Questions for Prelims

1.1

Geomorphology

Source

NCERT Class XI & XII

Geomorphology : Factors controlling landform development; endogenetic and exogenetic forces; origin and evolution of the earth's crusts; Fundamentals of geomagnetism; Physical conditions of the earth's interior; Geosynclines; Continental drift; Isostasy; Plate tectonics; Recent views on mountain building; Volcanicity; Earthquakes and Tsunamis; Concepts of geomorphic cycles and Land scape development; Denudation chronology; Channel Morphology; Erosion surfaces; Slope development; Applied Geomorphology; Geomorphology, economic geology and environment.

The Origin and Evolution of the Earth/ the Universe

- What do you understand by the Process of accretion?
Choose the correct option:
 - Process involved in the formation of black holes.
 - Formation of solar flares from the sun.
 - Formation of larger planetary objects and Planets.
 - Burning of satellite materials due to the frictional force of air.
- Consider the following statements regarding the Big Bang theory:
 - Initially all matter forming the universe existed in one place in the form of a Singular atom.
 - There is a continue expansion till date, but now the process has slowed down.
 - Within 300,000 years from the Big Bang, temperature rises to 4,500 K (Kelvin) and gave rise to atomic matter.

Choose the correct answer from options given below:

(a) Only 1 and 3	(b) Only 1
(c) Only 2 and 3	(d) All are correct.
- What do you understand by the term NEBULA? Choose the correct option:
 - A Star closest to the pole star.
 - Galaxy believed to be closest to the Milky Way galaxy.
 - A newly identified black hole by Hubble telescope.
 - Accumulation of hydrogen gas in the form of a very large cloud.
- Which of the following are the Terrestrial planets?

1. Mercury	2. Venus
3. Jupiter	4. Mars

Choose the correct answer from options given below:

(a) Only 1 and 3	(b) Only 1, 2 and 3
(c) Only 1, 2 and 4	(d) All are correct.
- Consider the following statements regarding terrestrial and Jovian planets:
 - Terrestrial planets were formed in the close vicinity of the parent star, whereas Jovian planets were formed at quite a distant location.
 - Terrestrial planets are larger and their large gravity could hold the escaping gases.

3. The solar winds were intense to cause removal of gases from the Jovian planets as same in the case of terrestrial planets.

Which of the following options are correct?

- (a) Only 1 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

6. Correctly arrange the three stages in the evolution of the present atmosphere:

- Hot interior of the earth contributed to the evolution of the atmosphere.
- Composition of the atmosphere was modified by the living world through the process of photosynthesis.
- Loss of primordial atmosphere.

Choose the correct answer from options given below:

- (a) 1-3-2 (b) 3-2-1
(c) 3-1-2 (d) 1-2-3

7. Consider the following statements regarding the Light year:

- A light year is a measure of time.
- Light travels at a speed of 300,000 km/second.
- The distances the light will travel in one year is taken to be one light year.

Choose the correct answer from options given below:

- (a) Only 1 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

8. Consider the following statements regarding the Formation of Planets:

- The stars are localised lumps of gas outside a nebula.
- The gravitational force within the lumps leads to the formation of a core to the gas cloud.
- Large number of small planetesimals accrete to form a few large bodies in the form of planets.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

9. What do you understand by term Big Splat?

- (a) Giant impact made the formation of moon.
(b) Giant impact made the formation of sun.
(c) Giant impact made the formation of mercury.
(d) Giant impact made the formation of Venus.

10. Consider the following statements regarding the Evolution of lithosphere:

- Due to gradual increase in density the temperature inside has decreased.
- Due to this temp change, the heavier materials (like iron) to sink towards the centre of the earth and the lighter ones to move towards the surface.
- From the crust to the core, the density of the material increases.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct

11. The present composition of earth's atmosphere is chiefly contributed by?

- (a) Hydrogen and oxygen
(b) Hydrogen and nitrogen
(c) Nitrogen and oxygen
(d) Oxygen and Hydrogen

12. What do you understand by the term degassing?

- (a) process through which the gases were outpoured from the interior.
(b) process through which the gases were outpoured from the rocks.
(c) process through which the gases were outpoured from the coal fields.
(d) process through which the gases were outpoured from the International space station.

13. Consider the following statements regarding EARLY THEORIES about origin of Earth and choose the correctly matched pair:

Theory

Propounder

- Nebular Hypothesis - Immanuel Kant
- Wandering star - Chamberlain and Moulton
- Binary theories - Sir James Jeans and Sir Harold Jeffrey

Correct code:

- (a) 1 and 3 (b) 2 and 3
(c) 1 only (d) 1, 2 and 3

14. Expanding Universe Hypothesis is suggested by:

- (a) Otto Schmidt (b) Edwin Hubble
(c) Immanuel Kant (d) Alfred Wegener

15. Consider the following statements regarding The Big Bang Theory

- Event of big bang took place 13.7 Billion years before the present but the expansion continues even to the present day

2. Within first three minutes from the Big Bang event, the first atom began to form.
3. Within 300,000 years from the Big Bang, temperature dropped to 4,500 K (Kelvin) giving rise to atomic matter and the universe became transparent.

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1, 2 and 3 (d) 1 only

- 16.** Consider the following statements about star formation

1. A galaxy starts to form by accumulation of hydrogen gas in the form of a very large cloud called nebula
2. Formation of stars have their genesis in these nebulas
3. The distribution of matter and energy was even in the early universe that further aided star formation

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

- 17.** Arrange the following in correct order of their formation:

- | | |
|-------------------------|--------------|
| 1. Nebula | 2. Gas cloud |
| 3. Planetesimals | 4. Planets |
| 5. Rotating disc of gas | |

Correct code:

- (a) 2-4-3-1-5 (b) 2-1-4-5-3
(c) 1-2-5-3-4 (d) 1-3-5-2-4

- 18.** Consider the following statements regarding Moon:

1. It is an outcome of 'giant impact' of the body of the size of one to three times that of Jupiter collided into the earth
2. The portion of blasted material then continued to orbit the earth and eventually formed into the present moon

Select the correct statements from above:

- (a) 1 only (b) 2 only
(c) Both (d) None

- 19.** Consider the following statements:

1. Due to gradual increase in density the temperature inside the earth has decreased during its primordial stage
2. Separation according to densities allowed heavier materials (like iron) to sink towards the centre of the earth and the lighter ones to move towards the surface.

3. Process of differentiation separated the earth forming material into different layers with in-creasing density downwards

Which of the above statements is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 2 (d) 1, 2 and 3

- 20.** Consider the following statements:

1. All terrestrial planets supposed to have lost their primordial atmosphere through the impact of solar winds.
2. Evolution of the present atmosphere is the result of gases and water vapour that were released from the interior solid earth
3. The early atmosphere largely contained abundance of oxygen, water vapour, carbon dioxide& methane.

Select the incorrect statements from the above:

- (a) 1 and 2 (b) 3 only
(c) 1 only (d) 2 and 3

- 21.** Consider the following statements about Evolution of Hydrosphere

1. The earth's oceans were formed within 500 million years from the formation of the earth
2. Oceans began to have the contribution of oxygen through the process of photo-synthesis, that evolved around 2,500-3,000 million years before the present
3. Life was confined to the oceans for a long time.

Choose the correct statements from above:

- (a) 1 and 2 (b) 1 and 3
(c) 2 and 3 (d) 1, 2 and 3

- 22.** Which one of the following is not related to the formation or modification of the present atmosphere?

- (a) Solar winds (b) Differentiation
(c) Degassing (d) Photosynthesis

Interior of the Earth/Volcanism/ Earthquakes

- 23.** Which of the following best describe the term "Gravity anomaly":

- (a) Variations in the strength of the gravitational force over the surface of the Earth.
- (b) Difference between the Gravity of Earth and Moon.
- (c) A scientific method to find the value of gravity.
- (d) Gravitational pull experienced on the poles of earth.

24. In the event of an earthquake, which one would be the first one to experience the Earthquake waves?
 (a) Epicentre (b) Hypocentre
 (c) Focus (d) Zone of tension.
25. Consider the following statements regarding the earthquake waves:
 1. Surface waves are generated due to the release of energy at the focus and move in all directions travelling through the body of the earth.
 2. The velocity of waves changes as they travel through materials with different densities.
 3. The S-waves is that they can travel only through solid materials.
 Select the correct options:
 (a) Only 1 (b) All are correct
 (c) Only 2 and 3 (d) Only 1 and 3.
26. Consider the following statements regarding the measuring of the EARTHQUAKES:
 1. The earthquake events are scaled either according to the magnitude or intensity of the shock.
 2. The magnitude scale is known as the Mercalli scale, whereas the intensity scale is called Richter scale.
 3. The range of intensity scale is from 1-10.
 Choose the correct statements from the given option:
 (a) Only 1 (b) Only 2 and 3
 (c) All are correct (d) Only 1 and 2.
27. Consider the following statements regarding the STRUCTURE OF THE EARTH:
 1. Crust is the outermost solid part of earth and thickness of the crust varies under the oceanic and continental areas.
 2. Continental crust is thinner as compared to the Oceanic crust.
 3. The lower portion of the mantle is called asthenosphere and it is considered to be extending up to 400 km.
 Choose the correct answer from options given below:
 (a) Only 1 (b) Only 2
 (c) only 2 and 3 (d) All are correct.
28. Which of the following is also considered as Nife layer?
 (a) Crust (b) Upper crust
 (c) Mantle (d) Core
29. What are the direct sources about the interior of the earth?
 1. Deep Ocean drilling
 2. Volcanic eruptions
 3. Seismic activity
 4. Magnetic field.
 Choose the correct answer from options given below:
 (a) 1, 2 and 4 (b) 1 and 2
 (c) 3 and 4 (d) All are correct.
30. Consider the following statements regarding the Earthquakes:
 1. An earthquake is an unnatural event.
 2. It is caused due to release of energy, which generates waves that travel in single direction.
 3. Area with tectonic movements witnessed the most number of earthquakes.
 Choose the correct answer from options given below:
 (a) Only 1 and 2 (b) Only 2 and 3
 (c) Only 3 (d) All are correct.
31. Consider the following statements regarding the Earthquake waves:
 1. P-waves move faster and are the first to arrive at the surface.
 2. The P-waves are similar to sound waves. They travel through gaseous, liquid and solid materials.
 3. S-waves arrive at the surface with some time lag. These are called secondary waves
 Choose the correct answer from options given below:
 (a) Only 1 and 2 (b) Only 2 and 3
 (c) Only 1 and 3 (d) All are correct.
32. Which of the following waves are more destructive?
 (a) Primary waves (b) Surface waves
 (c) Sound waves (d) Destructive waves.
33. Consider the following statement regarding the Propagation of Earthquake Waves:
 1. S-waves vibrate parallel to the direction of the wave.
 2. The direction of vibrations of P-waves is perpendicular to the wave direction in the vertical plane.
 3. Surface waves are considered to be the most damaging waves.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 3 (d) All are correct.

34. Consider the following statements regarding the Shadow Zone:

1. The shadow zone of S-wave is much larger than that of the P-waves.
2. The shadow zone of S-waves is not only larger in extent but it is also a little over 40 per cent of the earth surface.
3. Seismographs located at any distance within 105° from the epicentre, recorded the arrival of both P waves and S waves.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

35. Consider the following statements regarding the Types of Earthquakes:

1. The most common ones are the tectonic earthquakes.
2. A special class of tectonic earthquake is sometimes recognised as volcanic earthquake. However, these are confined to areas of active volcanoes.
3. Collapse earthquakes occurs when due to the explosion of chemical or nuclear devices.

Choose the correct answer from options given below:

- (a) Only 1 and 3 (b) Only 2 and 3
(c) Only 1 and 2 (d) All are correct.

36. Which of the following are the effect of earthquakes?

1. Ground Shaking
2. Avalanches
3. Ground displacement
4. Tectonic movement
5. Soil liquefaction

Choose the correct answer from options given below:

- (a) 1, 2 and 4 (b) 1, 2, 3 and 5
(c) 1, 2 and 3 (d) All are correct.

37. Consider the following statements

1. The configuration of the surface of the earth is largely a product of the Ex-ogenic as well as Endogenic processes

2. Volcanic eruption forms a very important source of obtaining indirect information about the earth's interior

Which of the above is/are correct?

- (a) 1 only (b) 2 only
(c) Both (d) None

38. Consider the following statements:

1. The release of seismic energy occurs along a fault which is a sharp break in the crustal rocks.
2. Rocks along a fault tend to move in opposite directions
3. When the blocks of rocks get deformed and eventually slide past one another abruptly, there is release of seismic energy travelling in all directions.

Which of the above is/are incorrect?

- (a) 1 and 2 (b) 2 and 3
(c) 2 only (d) None of the above

39. Consider the following and choose the correct statements:

1. Hypocentre is the point from where the seismic energy is released during the earthquake
2. Epicentre, a point directly below the Hypocentre, is the first one to experience the waves.

Correct code:

- (a) 1 only (b) 2 only
(c) Both (d) None

40. Consider the following statements:

1. All natural earthquakes take place in the lithosphere.
2. Lithosphere refers to the portion of depth up to 100 km from the surface of the earth.

Choose the incorrect statements from above:

- (a) 1 only (b) 2 only
(c) Both (d) None

41. Consider the following statements regarding Seismic waves

1. The velocity of seismic waves changes as they travel through materials with different densities
2. The denser the material, the slower is the velocity of seismic waves
3. Surface waves are always preceded by Body waves.

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

42. W.r.t Propagation of Earthquake Waves, consider the following statements:

1. The P-waves are similar to sound waves so they can travel only through solid materials
2. P-waves vibrate parallel to the direction of the wave whereas the direction of vibrations of S-waves is perpendicular to the wave direction in the vertical plane.
3. The surface waves are the last to report on seismograph and they are more destructive than Body waves

Choose the correct statements from above:

- (a) 1 only (b) 2 and 3
(c) 1 and 2 (d) 1 and 3

43. Consider the following and choose the correct statements:

1. Shadow Zones are the specific areas where the seismic waves are not reported on seismograph
2. For each earthquake, there exists an altogether different shadow zone
3. The shadow zone of P-wave is much larger than that of the S-waves

Correct code:

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

44. Consider the following statements about asthenosphere:

1. The upper portion of the crust is called asthenosphere
2. It extending upto 400 km and is the main source of magma
3. The crust and the uppermost part of the mantle are called lithosphere
4. Asthenosphere is mostly present in solid state.

Select the correct statements from above:

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

45. In Volcanism, The material that reaches the ground includes:

1. Pyroclastic debris
2. Ash and Dust
3. Volcanic bombs
4. Nitrogen & Sulphur compounds

Select the correct code:

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

46. W.r.t Shield Volcanoes, consider the following statements:

1. They are the largest of all the volcanoes on the earth
2. These volcanoes are mostly made up of basalt which is very fluid when erupted.
3. Apart from being highly explosive, they are very steep

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1, 2 and 3 (d) 1 and 3

47. Which of the following is/are correctly matched?

Volcano	Type Characteristics
1. Caldera	- Most explosive of the earth's volcanoes
2. Composite Volcanoes	- Large quantities of pyroclastic material and ashes
3. Flood Basalt Provinces	- Highly viscous lava

Choose the correct code:

- (a) 3 only (b) 1 and 3
(c) 2 and 3 (d) 1 and 2

48. The Deccan Traps of India are the example of:

- (a) Shield Volcanoes
(b) Composite Volcanoes
(c) Flood Basalt Provinces
(d) None of the above

49. Which one of the following describes the lithosphere:

- (a) upper and lower mantle
(b) crust and upper mantle
(c) crust and core
(d) mantle and core

Distribution of Oceans and Continents/ Theories in Geomorphology

50. Consider the following statements regarding the Force of Drifting in the context of Continental drift:

1. Arthur Holmes suggested that the movement responsible for the drifting of the continents was caused by pole-fleeing force and tidal force.
2. The polar-fleeing force relates to the revolution of the earth.
3. Tidal force develops due to the attraction of the moon alone

Choose the correct answer from options given below:

- (a) Only 1 (b) Only 2 and 3
(c) Only 3 (d) None of the above.

51. Consider the following statements regarding the Wegner's continent drift theory:
1. All the continents formed a single supercontinent called Pangaea.
 2. The mega-ocean was called Panthalassa surrounded Pangaea.
 3. Pangaea broke into two large continental masses as Laurasia and Gondwanaland.

Choose the correct options:

- (a) Only 1 (b) Only 2 and 3
(c) All are correct (d) Only 1 and 3.

52. Which of the following is not correctly matched:
1. Continental Margins - Transition between continental shores and deep-sea basins
 2. Abyssal Plains - Extensive plains that lie between the continental margins and mid-oceanic ridges
 3. Mid-Oceanic Ridges - Interconnected chain of mountain system.

Choose the correct answer from options given below:

- (a) Only 1
(b) Only 2
(c) Only 2 and 3
(d) All are correctly matched.

53. Which of the following are the major Plates in World Ocean?
1. Antarctica Plate
 2. Eurasia and the adjacent oceanic plate.
 3. Arabian plate.
 4. Cocos plate.
 5. South American Plate.

Choose the correct answer from options given below:

- (a) Only 1, 2 and 3
(b) Only 1, 2 and 5
(c) Only 1, 3 and 5
(d) All are correct except 4.

54. Consider the following statements regarding the Continental drift theory of Alfred Wegner:
1. The super continent was named PANTHALASSA, which meant all earth. The mega-ocean was called PANGAEA, meaning all water.
 2. Around 200 million years ago, the super continent, PANTHALASSA, began to split.

3. All the continents formed a single continental mass and Mega Ocean surrounded the same.

Choose the Incorrect statements from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct

55. Consider the following statements regarding the Evidence in Support of the Continental Drift:

1. The shorelines of Asia and South America facing each other have a remarkable and unmistakable match.
2. The belt of ancient rocks of 2,000 million years from Brazil coast matches with those from East Africa.
3. The Gondwana system of sediments from India is known to have its counterparts in six different landmasses of the Southern Hemisphere.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2
(c) Only 3 (d) All are correct.

56. Which of the following statement best describe the term Mesosaurus?

- (a) a small reptile adapted to fresh water of Mediterranean Sea.
- (b) a small reptile adapted to fresh waters of black sea
- (c) a small reptile adapted to shallow brackish water.
- (d) A type of species recently found in Himalayas.

57. Consider the following statements regarding the Conventional current theory:

1. Arthur Holmes in 1930s discussed the possibility of convection currents operating in the mantle portion.
2. Holmes argued that there exists a system of such currents in the entire mantle portion.
3. These currents are generated due to radioactive elements causing thermal differences in the mantle portion.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

58. Which of the following were found to be most active in terms of volcanic eruptions?
- Fault lines.
 - Mid oceanic ridges
 - Continental margins
 - None of the above.
59. Abyssal plains are extensive plains that lie between the?
- Continental margin and slope
 - Continental slope and mid oceanic ridge
 - Continental margins and mid oceanic ridge
 - Continental rise and mid oceanic ridge.
60. Which of the following are called as a fractionated plateau and flank zone all along its length?
- Continental margin
 - mid oceanic ridge
 - Abyssal plain
 - Continental slope.
61. Consider the following statements regarding the CONCEPT OF SEA FLOOR SPREADING:
- All along the midoceanic ridges, volcanic eruptions are common and they bring huge amounts of lava to the surface in this area.
 - Rocks closer to the mid-oceanic ridges have reverse polarity and are the Older one
 - The ocean crust rocks are much younger than the continental rock.
- Choose the correct answer from options given below:
- Only 1 and 2
 - Only 2 and 3
 - Only 1 and 3
 - All are correct.
62. Who first proposed the possibility of the two Americas, Europe and Africa, to be once joined together?
- Antonio Pellegrini
 - Alfred Wegener
 - Abraham Ortelius
 - Arther Holmes
63. Consider the following statements w.r.t Tillite:
- It is the sedimentary rock formed out of deposits of glaciers.
 - The Gondawana system of sediments from India has thick tillite indicating extensive and pro-longed glaciation
 - The glacial tillite provides unambiguous evidence of palaeoclimates and also of drifting of continents
- Which of the above is/are correct?
- 1 and 2
 - 2 and 3
 - 1 and 3
 - 1, 2 and 3
64. W.r.t Convectional Current Theory, Consider the following statements:
- Convection currents are generated due to radioactive elements causing thermal differences in the Earth's crust
 - This theory provided an explanation to the issue of force, on the basis of which contemporary scientists discarded the continental drift theory.
 - This theory was prosed by Herry Hess in 1930s
- Choose the correct statements from above:
- 1 and 3
 - 2 only
 - 1 and 3
 - 1, 2 and 3
65. Which of the following is/are the Evidences in Support of the Continental Drift put for-ward by Alfred Wegener?
- Jig-Saw-Fit
 - Mapping of the Ocean Floor
 - Convectional Current Theory
 - Distribution of Fossils
 - Placer Deposits
- Correct code:
- 1, 2 and 5
 - 1, 2, 3 and 4
 - 1, 4 and 5
 - All of the above
66. Consider the following statements:
- Continental Margins form the transition between continental shores and deep-sea basins
 - It includes continental shelf and continental slope only
- Select the correct statements from above
- 1 only
 - 2 only
 - Both
 - None
67. Consider the following statements:
- The deep trenches have deep-seated earthquake occurrences while in the mid-oceanic ridge areas, the quake foci have shallow depths
 - The rocks equidistant on either sides of the crest of mid-oceanic ridges show remarkable similarities in terms of period of formation, chemical compositions and magnetic properties
 - The sediments on the ocean floor are very thick and old
- Choose the incorrect statements from above:
- 1 and 2
 - 2 and 3
 - 3 only
 - 1, 2 and 3

68. Consider the following and choose the correct statements about tectonic plate
1. A tectonic plate is a massive, irregularly-shaped slab of solid rock which is always composed of continental lithosphere only
 2. Lithospheric Plates move horizontally over the oceans as rigid units

Correct code:

- (a) 1 only (b) 2 only
(c) Both (d) None

69. Consider these statements w.r.t Force for the Plate Movement:

1. Radioactive decay is the one and only source of heat within the earth
2. In convective flow within the earth, the heated material rises to the surface, spreads and begins to cool, and then sinks back into deeper depths
3. The slow movement of hot, softened mantle that lies below the rigid plates is the driving force behind the plate movement

Select the correct statements from above:

- (a) 1 and 2 (b) 2 and 3
(c) 2 only (d) 1, 2 and 3

Minerals and Rocks

70. Match the following with regards to Minerals and it's characteristics or Use:

Minerals	Characteristic/Use
1. Feldspar	A. used in electrical instruments.
2. Quartz	B. used in jewellery
3. Olivine	C. used in ceramics and glass making.
4. Mica	D. Used in radio and radar

Choose the correct answer from options given below:

- (a) 1-A, 2-B, 3-C, 4-D
(b) 1-C, 2-D, 3-A, 4-B
(c) 1-C, 2-D, 3-B, 4-A
(d) 1-D, 2-A, 3-B, 4-C

71. Consider the following statements regarding the Minerals:

1. Metallic Minerals contain metal content and its example includes Sulphur, phosphates and nitrates.

2. Cement is a mixture of non-metallic minerals.
3. Half of the earth's crust is composed of feldspar.

Choose the Incorrect statements:

- (a) Only 1 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct

72. Which of the following are the Non-ferrous metals?

1. Lead
2. Platinum
3. Iron
4. Zinc
5. Aluminum.

Choose the correct answer from options given below:

- (a) 1, 2 and 4 (b) 2, 3 and 5
(c) 1, 4 and 5 (d) 3 and 4.

73. Petrology is the study of?

- (a) Soil (b) Rock
(c) Minerals (d) Crust.

74. Consider the following rocks and their mode of formation:

Rock	Formation
1. Igneous rocks	A. solidified from magma and lava
2. Sedimentary rocks	B. deposition of fragments of rocks by exogenous processes
3. Metamorphic rocks	C. formed out of existing rocks undergoing recrystallization.

Choose the correct answer from options given below:

- (a) 1-A, 2-B, 3-C (b) 1-B, 2-C, 3-A
(c) 1-C, 2-A, 3-B (d) 1-A, 2-C, 3-B

75. Which of the following type of rocks are formed under the "action of pressure, volume and temperature (PVT) changes"?

- (a) Igneous rocks
(b) Metamorphic rocks
(c) Sedimentary rocks
(d) Desert rocks.

- 76.** Consider the following statements regarding the Minerals:
1. Earth is composed of various kinds of elements. These elements are in solid form in the outer layer of the earth and in hot and molten form in the interior.
 2. About 98 per cent of the total crust of the earth is composed of eight elements like oxygen, silicon, aluminium, and iron except magnesium.
 3. Oxygen found in the major amount in the earth's crust.
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.
- 77.** Arrange the following in increasing order according to their weightage in earth's crust:
1. Oxygen
 2. Silicon
 3. Aluminium
 4. Iron
 5. Calcium
- Choose the correct answer from options given below:
- (a) 1<2<3<4<5 (b) 2<1<3<5<4
(c) 5<4<3<2<1 (d) 5<4<2<1<3
- 78.** Consider the following statements regarding the Minerals:
1. A mineral is a naturally occurring organic and inorganic substance.
 2. A mineral is composed of two or more elements.
 3. Sulphur, copper, silver, gold, graphite etc. are examples of two or more element minerals.
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.
- 79.** What do you understand by the term Lustre?
- (a) colour of the ground powder of any mineral.
 - (b) ratio between the weight of a given object and the weight of an equal volume of water.
 - (c) appearance of a material without regard to colour
 - (d) A kind of mineral found in the caves of ellora.
- 80.** Consider the following statement:
Silicon and oxygen are common elements in this mineral. Half of the earth's crust is composed of this mineral. It has light cream to salmon pink colour. It is used in ceramics and glass making.
Identify the mineral:
- (a) Mica (b) Quartz
(c) Feldspar (d) Pyroxene
- 81.** Read the paragraph and identify the mineral:
It is one of the most important components of sand and granite. It consists of silica. It is a hard mineral virtually insoluble in water. It is white or colourless and used in radio and radar. It is one of the most important components of granite.
Choose the correct option:
- (a) Feldspar (b) Mica
(c) Quartz (d) Olivine.
- 82.** Read the paragraph and identify the mineral:
It comprises of potassium, aluminium, magnesium, iron, silica etc. It forms 4 per cent of the earth's crust. It is commonly found in igneous and metamorphic rocks. It is used in electrical instruments.
Choose the correct option:
- (a) Mica (b) Olivine
(c) Pyroxene (d) Amphibole
- 83.** Consider the following statements regarding the Rocks:
1. A rock is an aggregate of one or more minerals.
 2. Rocks do not have definite composition of mineral constituents.
 3. Feldspar and quartz are the most common minerals found in rocks.
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.
- 84.** Which of the following are the examples of igneous rocks?
1. Granite
 2. Pegmatite
 3. Sandstone
 4. Chert
 5. Limestone.
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2, 3 and 5
(c) Only 1 and 5 (d) All are correct.

85. Consider the following statements:
1. Mineral is a naturally occurring substance which is always inorganic
 2. It has a definite chemical composition and physical properties.
 3. A mineral is always composed of two or more elements.

Which of the above is/are correct?

- (a) 1 and 3 (b) 2 and 3
(c) 1, 2 and 3 (d) 2 only

86. Consider the following details regarding Physical Characteristics of a Miner-AI?

Properties	Details
1. Cleavage	- A. The ratio between the weight of a given object and the weight of an equal volume of water
2. Streak	- B. tendency to break in given directions producing relatively plane surfaces
3. Hardness	- C. colour of the ground powder of any mineral
4. Specific gravity	- D. relative resistance being scratched

Which of the above is/are correctly matched?

- (a) 1-B, 2-C, 3-D, 4-A
(b) 1-A, 2-C, 3-B, 4-D
(c) 1-C, 2-D, 3-A, 4-B
(d) 1-B, 2-A, 3-C, 4-D

87. Consider the following statements regarding Igneous Rocks:

1. When magma in its upward movement cools and turns into solid form it is called igneous rock.
2. The process of cooling and solidification always happen on the surface of the earth.
3. Igneous Rock's Mineral grains may be very large in case of sudden cooling whereas Slow cooling results in small and smooth grains.

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1 only

88. Consider the following statements regarding Sedimentary Rocks:

1. They are formed when the rocks surface are exposed to denudational agents and are broken up into various sizes of fragments

2. In many sedimentary rocks, the layers of deposits retain their characteristics even after lithification
3. A number of layers of varying thickness in sedimentary rocks

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

89. Depending upon the mode of formation, sedimentary rocks are classified into three major groups. Which of the following is/are correctly matched?

Group	Examples
--------------	-----------------

- | | |
|------------------------|-------------|
| 1. Mechanically formed | — Chalk |
| 2. Organically formed | — Chert |
| 3. Chemically formed | — Sandstone |

Correct Code:

- (a) 1, 2 and 3
(b) 1 and 2
(c) 2 and 3
(d) None of the above

90. Consider the following statements about Metamorphic Rocks

1. Metamorphism occurs when rocks are forced down to lower levels by tectonic processes
2. These rocks form under the action of pressure, volume and temperature (PVT) changes
3. In this process already consolidated rocks undergo recrystallisation and reorganisation of materials within original rocks.

Choose the correct code:

- (a) 1 and 2 (b) 3 only
(c) 1, 2 and 3 (d) 2 and 3

91. Consider the following statements:

1. In contact metamorphism rocks undergo recrystallisation due to deformation caused by tectonic shearing together with high temperature or pressure or both.
2. In regional metamorphism, the rocks come in contact with hot intruding magma and lava and the rock materials recrystallise under high temperatures.

Which of the above is/are correct?

- (a) 1 only (b) 2 only
(c) Both (d) None

92. Choose the correct Match:
1. Foliation:- Rocks/Minerals arranged into alternating thin to thick layers.
 2. Banding:- Rocks grains or minerals arranged in layers or lines.
 3. Dynamic metamorphism:- Reorganisation of the minerals due to breaking and crushing
- Select the correct code:
- (a) 3 only (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

Geomorphic Processes- Endogenic & Exogenic

93. Consider the following statements regarding the Geomorphic processes:
1. Diastrophism and volcanism are endogenic geomorphic processes.
 2. Weathering, mass wasting, erosion and deposition are exogenic geomorphic processes.
 3. Any exogenic element of nature (like water, ice, wind, etc.,) capable of acquiring and transporting earth materials can be called a geomorphic agent.

Choose the correct statements from the options given below:

- (a) Only 1 (b) Only 3
(c) Only 1 and 3 (d) All are correct.

94. Under Diastrophism, Consider the following processes and its characteristics:

Process	Characteristics
1. Orogenic processes	A. Horizontal movements of crustal plates.
2. Epeirogenic processes	B. Local relatively minor movements
3. Earthquakes	C. Uplift or warping of large parts of the earth's crust
4. Plate tectonics	D. mountain building through severe folding

Choose the correct answer from options given below:

- (a) 1-A, 2-B, 3-C, 4-D
(b) 1-C, 2-A, 3-B, 4-D
(c) 1-D, 2- C, 3-B, 4-A
(d) 1-B, 2-A, 3-C, 4-D

95. Consider the following statements regarding the Geomorphic processes:

1. All the endogenic geomorphic processes are covered under a general term, de-nudation.
2. Temperature and precipitation are the two important climatic elements that control various processes.
3. Chemical processes normally lead to tightening of bonds between grains, dissolving of soluble minerals or cementing materials.

Choose the correct answer from options given below:

- (a) Only 1 and 3 (b) Only 2
(c) Only 2 and 3 (d) All are correct.

96. Consider the following statements regarding the Temperature Changes and Expansion in minerals:

1. Rise in temperature, every mineral contracts and pushes against its neighbour and as temperature falls, a corresponding expansion takes place.
2. Due to differential heating and resulting expansion and contraction of surface layers and their subsequent exfoliation from the surface results in smooth rounded surfaces in rocks.
3. The surface layers of the rocks tend to expand more than the rock at depth.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 3 (d) All are correct..

97. Consider the following statements regarding the Salt Weathering:

1. Salts in rocks expand due to thermal action, hydration and crystallisation.
2. Expansion of these salts depends on temperature and their thermal properties.
3. Lower temperature ranges between 10 and 20 degree Celsius of surface temperatures in deserts favour such salt expansion.

Choose the Incorrect statements from options given below:

- (a) Only 1 (b) Only 1 and 2
(c) Only 3 (d) All are correct

- 98.** Which of the following are the slow movements under Mass Movements?
1. Creep
 2. Solifluction
 3. Earthflow
 4. Mudflow
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 3 and 4
(c) Only 2 and 4 (d) All are correct.
- 99.** Consider the following statements regarding the geomorphic processes:
1. The earth's surface is being continuously subjected to external forces induced basically by energy (sunlight).
 2. The internal forces are still active though with different intensities.
 3. The external forces are known as endogenic forces and the internal forces are known as exogenic forces.
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.
- 100.** The phenomenon of wearing down of relief variations of the surface of the earth through erosion is known as?
- (a) Denudation (b) Degradation
(c) Gradation (d) Weathering
- 101.** Which of the following are Endogenic geomorphic processes?
1. Diastrophism
 2. Volcanism
 3. Weathering
 4. Deposition
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 2, 3 and 4 (d) All are correct.
- 102.** The energy emanating from within the earth is the main force behind which kind of geomorphic process?
- (a) Endogenic geomorphic process
(b) Exogenic geomorphic process
(c) Orogenic geomorphic process
(d) Epeirogenic process
- 103.** Consider the following statements regarding the Orogeny and Epeirogeny processes.
1. In the process of orogeny, the crust is severely deformed into folds. Due to epeirogeny, there may be simple deformation.
 2. Orogeny is a Continental building process whereas epeirogeny is mountain building process.
3. All these processes cause pressure, volume and temperature (PVT) changes which in turn induce metamorphism of rocks.
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.
- 104.** Consider the following statements regarding the Gravitational force:
1. Gravitational force acts upon all earth materials having a sloping surface and tend to produce movement of matter in down slope direction.
 2. Force applied per unit area is called stress.
 3. Forces acting along the faces of earth materials are shear stresses (separating forces).
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.
- 105.** All the exogenic geomorphic processes are covered under a general term?
- (a) Denudation (b) Degradation
(c) Gradation (d) Weathering
- 106.** Consider the following statements regarding the Oxidation:
1. Oxidation means a combination of a mineral with oxygen to form oxides or hydroxides.
 2. The minerals most commonly involved in this process are iron, manganese, sulphur etc.
 3. When oxidised minerals are placed in an environment where oxygen is present, reduction takes place.
- Choose the correct answer from options given below:
- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.
- 107.** Consider the following statements regarding the Frost weathering:
1. Frost weathering occurs due to growth of ice within pores and cracks of rocks during repeated cycles of freezing and melting.
 2. This process is most effective at high elevations in mid-latitudes where freezing and melting is often repeated.

3. Glacial areas are subject to frost wedging daily.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

108. Consider the following statements:

1. The endogenic forces are mainly land building forces and the exogenic processes are mainly land wearing forces.
2. Radioactivity alone is the main force behind endogenic geomorphic processes.
3. The action of endogenic forces is uniform

Choose the correct statements from above:

- (a) 1 and 3 (b) 1 only
(c) 2 and 3 (d) 1, 2 and 3

109. Which of the following is/are correctly Matched?

1. Orogenic processes:- Uplift or warping of large parts of the earth's crust
2. Epeirogenic processes:- mountain building
3. Earthquakes:- Local relatively minor movements
4. Plate tectonics:- horizontal movements of crustal plates

Correct Code:

- (a) 1, 2 and 4 (b) 1, 2 and 3
(c) 3 and 4 (d) All of the above

110. Consider the following statements regarding EXOGENIC PROCESSES:

1. The exogenic processes derive their energy from atmosphere
2. The basic reason that leads to weathering, mass movements, and erosion is development of stresses in the body of the earth materials.
3. Denudation covers all the exogenic geomorphic processes

Select the correct statements from above

- (a) 1 and 3 (b) 2 and 3
(c) 1 and 2 (d) 1, 2 and 3

111. Consider the following statements about Weathering:

1. Weathering is action of elements of weather and climate over earth materials.
3. It is an ex-situ process
3. Mechanical disintegration and Chemical decomposition of rocks come under it

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

112. Weathering processes are conditioned by which of the following factors?

1. Geological 2. Climatic
3. Topographic 4. Vegetative

Choose the correct code:

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

113. Consider the following statements:

1. In areas of curved ground surface, arched fractures tend to produce massive sheets or exfoliation slabs of rock
2. Unloading and Pressure release forms the Exfoliation sheets
3. Exfoliation is an Exogenic process that removes of overlying rock load because of continued erosion

Select the correct statements from above:

- (a) 1 only (b) 1 and 2
(c) 1 and 3 (d) 2 and 3

114. W.r.t. SIGNIFICANCE OF WEATHERING, consider the following statements:

1. The Process of Erosion is independent of weathering
2. Weathering aids mass wasting and reduction of relief
3. It is an important process in the formation of soils.

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

115. Consider the following factors and choose those which favour mass movements:

1. Weak unconsolidated materials
2. Thickly bedded rocks
3. Faults in rocks
4. Steep slopes
5. Abundance of vegetation

Correct code:

- (a) 1, 2 and 4 (b) 1, 2, 3 and 5
(c) 1, 3 and 4 (d) All of the above

116. Match the following:

- | | |
|-----------------|--|
| 1. Creep | A. Movement of water-saturated clayey down low-angle terraces or hillsides |
| 2. Solifluction | B. Movement of soil and debris is extremely slow and imperceptible |

3. Earthflow C. Thick layers of weathered materials get saturated with water and flow down along definite channels
4. Mudflow D. Slow downslope flowing soil mass or fine grained rock debris saturated or lubricated with water.

Correct code:

- (a) 1-C 2-A 3-D 4-B
 (b) 1-A 2-B 3-D 4-C
 (c) 1-B 2-D 3-A 4-C
 (d) 1-C 2-A 3-B 4-D

117. Consider the following statements:

1. Erosion involves acquisition and transportation of rock debris
2. Weathering aids erosion but it is not a pre-condition for erosion to take place
3. Deposition is a consequence of erosion and thus is not actually the work of any agent

Which of the above is/are correct?

- (a) 1 and 2 (b) 2 and 3
 (c) 2 only (d) 1, 2 and 3

118. Consider the following statements:

1. Himalayas are mostly made up of very hard rocks
2. Himalayas are tectonically active hence debris avalanches and landslides occur very frequently in the Himalayas.

Which of the above is/are correct?

- (a) 1 only (b) 2 only
 (c) Both (d) None

Landforms and their Evolution

119. Which of the following best define the term Monadnocks?

- (a) Plain forming as a result of stream erosion.
- (b) Deep valley with very steep to straight sides.
- (c) Shore docks made of natural deposits.
- (d) Lowland of faint relief with some low resistant remnants.

120. Which of the following best define the term Plunge pools?

- (a) small and shallow depression
- (b) streams flowing on low and gentle slopes.
- (c) deep holes at the base of waterfalls.
- (d) very deep and wide meanders

121. The River terraces may be formed due to:

1. Receding water after a peak flow
2. Change in hydrological regime due to climatic changes
3. Tectonic downward of land
4. Sea level changes in case of rivers closer to the sea.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 1, 2 and 4
 (c) Only 1, 2 and 3 (d) All are correct.

122. Consider the following statements regarding the Meanders:

1. They are not a landform but are only a type of channel pattern.
2. Deposition takes place along the convex bank and undercutting along the concave bank.
3. Ox-bow lakes cut-off loops of a meander due to erosion.

Choose the correct options:

- (a) Only 1 (b) Only 1 and 3
 (c) Only 2 and 3 (d) All are correct.

123. Consider the following statements regarding the Erosional landforms:

1. Cirques are the most common of landforms in glaciated mountains.
2. The divides between cirque side walls or head walls get broader because of progressive erosion.
3. The cirques quite often are found at the heads of glacial valleys.

Choose the correct answer from options given below:

- (a) Only 1 and 3 (b) Only 1
 (c) Only 2 and 3 (d) All are correct.

124. Match the forms of Sand dunes and its characteristics:

- | Dune Forms | Characteristics |
|---------------------------|--|
| 1. Crescent shaped dunes- | A. Forms when sandy surfaces are partially Covered with vegetation |
| 2. Parabolic dunes- | B. Points or wings directed away from wind direction |

3. Transverse dunes- C. Aligned perpendicular to wind direction.

Choose the correct answer from options given below:

- (a) 1-A, 2-C, 3-B (b) 1-B, 2-A, 3-C
(c) 1-C, 2-B, 3-A (d) 1-B, 2-C, 3-A

- 125.** Identify the stage of river from the following characteristics:

During this stage streams are plenty with good integration. The valleys are still V-shaped but deep; trunk streams are broad enough to have wider floodplains within which streams may flow in meanders confined within the valley.

Choose the correct options:

- (a) Youth stage (b) Mature Stage
(c) Old stage (d) Pre-Youth stage.

- 126.** Consider the following statements regarding the Old stage of river:

1. Smaller tributaries during old age are few with gentle gradients.
2. Streams meander freely over vast floodplains showing natural levees, oxbow lakes, etc.
3. Most of the landscape is at or slightly above sea level.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

- 127.** Consider the following statements regarding the Valleys:

1. Valleys start as small and narrow rills.
2. The rills will gradually develop into long and narrow gullies.
3. A gorge is almost equal in width at its top as well as its bottom.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

- 128.** Consider the following statements regarding the Incised or Entrenched Meanders:

1. It is common to find meandering courses over floodplains and delta plains where stream gradients are very gentle.
2. Meander loops develop over original gentle surfaces in the later stages of development of streams.

Choose the correct option:

- (a) Only 1 (b) Only 2
(c) Both 1 and 2 (d) None of the above.

- 129.** Which of type of topography is explained in the following paragraph:

Surfaces marking old valley floor or floodplain levels. They may be bedrock surfaces without any alluvial cover or alluvial terraces consisting of stream deposits.

Choose the correct options:

- (a) River terraces. (b) River valleys
(c) Potholes (d) Plunge pools.

- 130.** Consider the following statements regarding the River terraces:

1. River terraces are surfaces marking old valley floor or floodplain levels.
2. The river terraces may occur at the same elevation on either side of the rivers in which case they are called unpaired terraces.
3. When a terrace is present only on one side of the stream and with none on the other side or one at quite a different elevation on the other side, the terraces are called Paired terraces.

Choose the Incorrect statements from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

- 131.** Consider the following statements regarding the Alluvial fans:

1. Alluvial fans are formed when streams flowing from higher levels break into foot slope plains of low gradient.
2. Usually, the streams which flow over fans are not confined to their original channels for long.
3. Alluvial fans in humid areas show normally low cones with gentle slope.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

- 132.** Consider the following statements regarding the floodplains:

1. A river bed made of river deposits is the passive floodplain.
2. The floodplain above the bank is active floodplain.

3. The flood plains in a delta are called delta plains.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 3 (d) All are correct.

133. Consider the following statements regarding the Natural levees and point bars:

1. Natural levees are found along the banks of small rivers.
2. Natural levees low, linear and parallel ridges of coarse deposits along the banks of rivers.
3. Point bars are found on the concave side of meanders of large rivers.

Choose the correct answer from options given below:

- (a) Only 1 and 2 (b) Only 2 and 3
(c) Only 1 and 3 (d) All are correct.

134. Consider the following statements regarding Sand Dunes:

1. Transverse dunes are aligned parallel to wind direction.
2. Seif is similar to barchan with a small difference that Seif has only one wing
3. Parabolic dunes form when sandy surfaces have no vegetation

Which of the above is/are not correct?

- (a) 1 and 2 (b) 1 and 3
(c) 2 and 3 (d) All are correct

135. Consider the following statements:

1. Playa lakes are the shallow water bodies in glaciers
2. In such lakes, water is retained only for short duration
3. The playa plain covered up by salts is called alkali flats

Choose the correct statements from above:

- (a) 1 and 2 (b) 2 and 3
(c) 1 and 3 (d) 1, 2 and 3

136. Consider the following statements:

1. The desert floors get heated up too much and too quickly because of being dry and barren
2. The heated floors heat up the air directly above them and result in upward movements in the hot lighter air with turbulence

3. Winds cause deflation, abrasion and impact in hot deserts

Choose the correct statements from above:

- (a) 1, 2 and 3 (b) 2 and 3
(c) 1 and 2 (d) 1 and 3

137. Consider the following and choose the correct statements:

1. Beaches are characteristic of shorelines that are dominated by erosion
2. Beaches are permanent features.
3. Most of the sediment making up the beaches comes from land carried by the streams and rivers or from wave erosion

Correct code:

- (a) 3 only (b) 1 and 2
(c) 2 and 3 (d) 1, 2 and 3

138. Cliffs, Terraces, Caves and Stacks are the erosion features associated with:

- (a) Running Water
(b) Glaciers
(c) Waves And Currents
(d) Groundwater

139. Consider the following statements regarding coasts of India:

1. The West coast of India is a low sedimentary coast.
2. Depositional forms dominate in the West coast.

Select the correct statements:

- (a) 1 only (b) 2 only
(c) Both (d) None

140. Consider the following statements about Coastal processes in cycle of erosion:

1. The coastal landforms are independent of the configuration of land and sea floor and only depends on wave actions
2. High rocky coasts are considered to be submerged coasts whereas low, smooth and gently sloping sedimentary coasts to be emerged coasts

Which of the above is/are correct?

- (a) 1 only (b) 2 only
(c) Both (d) None

141. Match the following landform features with their characteristics:

Feature	Characteristics
1. Eskers	A. smooth oval shaped ridge-like features
2. Outwash Plains	B. Found at the foot of the glacial mountains
3. Moraines	C. A Sinuous ridge
4. Drumlins	D. Long ridges of deposits of glacial till

Correct code:

- (a) 1-B 2-A-3-D 4-C
- (b) 1-C 2-B C-D 4-A
- (c) 1-A 2-C 3-D 4-B
- (d) 1-C 2-D 3-A 4-C

142. Consider the following statements Glacial Valleys:

1. Glaciated valleys are V-shaped valley with narrow floors and relatively smooth, and steep sides.
2. There may be lakes gouged out of rocky floor or formed by debris within the valleys
3. Very deep glacial troughs filled with sea water and making up shoreline (in high latitudes) are called fjords/fjords.

Which of the above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1, 2 and 3

143. Consider the following statements about landforms created by Groundwater:

1. Stalactites rise up from the floor of the caves
2. Stalagmites hang as icicles being broad at their bases and taper towards the free ends
3. The stalagmite and stalactites eventually fuse to give rise to columns and pillars
4. Stalactites, Stalagmites and Pillars come under the Depositional Landforms created by Groundwater

Choose the correct statements from above:

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

144. Cycle of Erosion caused by Groundwater is known as:

- (a) Eolian Cycle
- (b) Karst Cycle
- (c) Fluvial Cycle
- (d) Coastal Cycle

145. W.r.t Braided Channels, consider the following statements:-

1. Deposition and lateral erosion of banks are essential for the formation of braided pattern.
2. Less discharge and more load in the valley favours dividing water flow into multiple threads

Which of the above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both
- (d) None

146. Consider the following statements about Meanders in rivers:

1. Meander is a landform that develops over flood and delta plains
2. It is Loop-like channel patterns formed due to very gentle gradients that work laterally on the banks.
3. Coriolis force also plays a significant role in river meandering

Select the correct statements from the above:

- (a) 2 and 3
- (b) 1 and 3
- (c) 1 and 2
- (d) 1, 2 and 3

147. Consider the following statements regarding landforms found associated with floodplains:

1. Natural levees are low, linear and parallel ridges of coarse deposits along the banks of rivers
2. The levee deposits are finer than the deposits spread by flood waters away from the river.
3. Point bars are found on the convex side of meanders of large rivers and are sediments deposited in a linear fashion by flowing waters along the bank

Which of the above is/are incorrect?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1, 2 and 3

148. Consider the following statements:

1. River terraces are surfaces marking new valley floor or floodplain levels.
2. They are basically products of erosion as they result due to vertical erosion by the stream into its own depositional floodplain
3. Areas of slow uplift of land or where the water column changes are not uniform along both the banks create paired terraces.

Choose the correct statements from the above:

- (a) 2 and 3
- (b) 1 and 2
- (c) 2 only
- (d) 1 and 3

HINTS & EXPLANATIONS

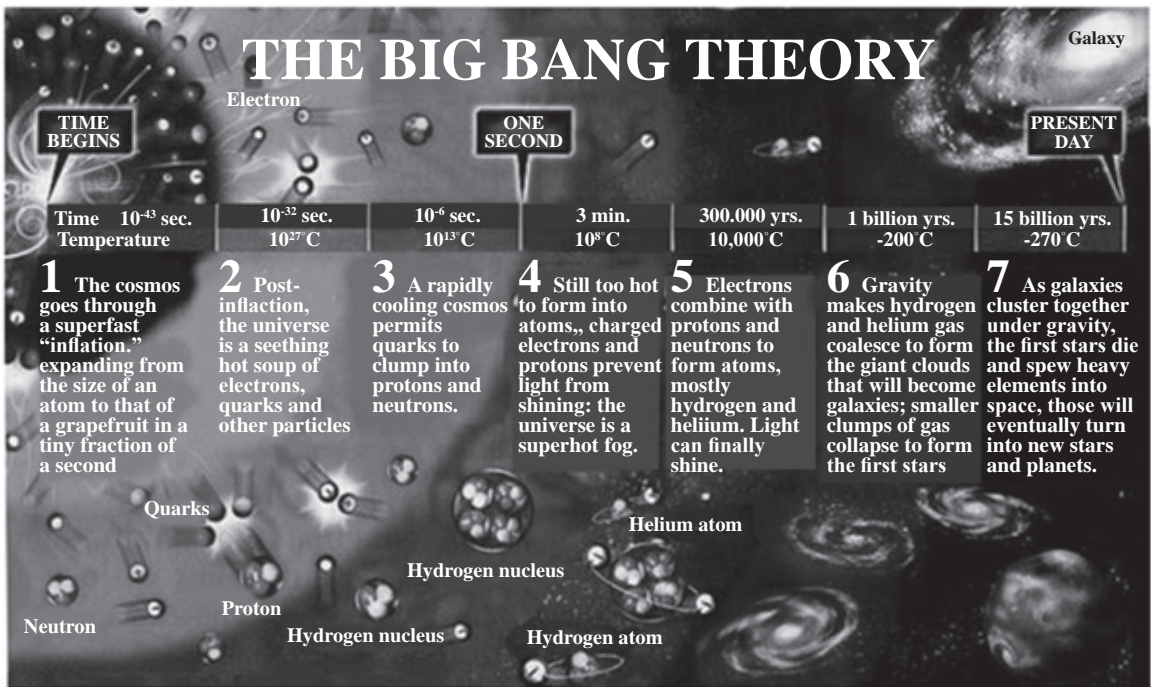
The Origin and Evolution of the Earth/ The Universe

- (c) The friction and collision of particles led to formation of a disk-shaped cloud and the planets were formed through the process of accretion.
Rest all the options are not related to the process of accretion.
- (b) Option 1 is correct - In the beginning, all matter forming the universe existed in one place in the form of a “tiny ball” (singular

atom) with an unimaginably small volume, infinite temperature and infinite density.

Option 2 is incorrect – The first part of the statement is correct, but there is no evidence that this process of expansion has now slowed down, therefore this thing make this statement wrong.

Option 3 is incorrect - Within 300,000 years from the Big Bang, tempera-ture dropped (NOT RISED) to 4,500 K (Kelvin) and gave rise to atomic matter. The universe became transparent



THE BIG BANG THEORY

TIME BEGINS	Electron	ONE SECOND	Galaxy	PRESENT DAY		
Time 10^{-43} sec. Temperature	10^{-32} sec. 10^{27} C	10^{-6} sec. 10^{13} C	3 min. 10^8 C	300,000 yrs. $10,000$ C	1 billion yrs. -200 C	15 billion yrs. -270 C

- The cosmos goes through a superfast “inflation,” expanding from the size of an atom to that of a grapefruit in a tiny fraction of a second
- Post-inflation, the universe is a seething hot soup of electrons, quarks and other particles
- A rapidly cooling cosmos permits quarks to clump into protons and neutrons.
- Still too hot to form into atoms,, charged electrons and protons prevent light from shining: the universe is a superhot fog.
- Electrons combine with protons and neutrons to form atoms, mostly hydrogen and helium. Light can finally shine.
- Gravity makes hydrogen and helium gas coalesce to form the giant clouds that will become galaxies; smaller clumps of gas collapse to form the first stars
- As galaxies cluster together under gravity, the first stars die and spew heavy elements into space, those will eventually turn into new stars and planets.

Labels in infographic: Quarks, Neutron, Proton, Hydrogen nucleus, Helium atom, Hydrogen atom, Galaxy

- (d) A galaxy starts to form by accumulation of hydrogen gas in the form of a very large cloud called nebula. Eventually, growing nebula develops localised clumps of gas. These clumps continue to grow into even denser gaseous bodies, giving rise to formation of stars.
- (c) The planets Mercury, Venus, Earth, and Mars, are called terrestrial because they have a compact, rocky surface, like Earth’s terra firma.

The terrestrial planets are the four innermost Planets in the solar system. The rest four are called Jovian or Gas Giant planets. Jovian means Jupiter-like.

- (a) **Statement 1 is correct** - The terrestrial planets were formed in the close vicinity of the parent star where it was too warm for gases to condense to solid particles. Jovian planets were formed at quite a distant location.