

Subject: Geology

Code No: 322

Qn.No	Scoring Indicators	Split Score	Total Score
1	c. Astronomy	1	1
2	<p>a) Any two Geological Organizations and their functions.</p> <p>G.S.I → Geological Survey of India (It conduct Geological Surveys and Studies)</p> <p>O.N.G.C → Oil and Natural Gas Commission. (It conduct Exploration and production activities of Oil and Gases)</p>	1 1	2
2b	<p>i) Exploration of minerals & fossil fuels</p> <p>ii) Exploration of Ground water</p> <p>iii) construction of buildings and structures</p> <p>civ) Prediction of Earthquake and hazards.</p> <p>(Any two field)</p>	1+1	2
3	a) Lithosphere, Asthenosphere, Mesosphere, outer core, Inner core.	1	1
4	<p>a) Yes.</p> <p><u>Meteors</u> → celestial bodies that enter into the earth's atmosphere</p> <p><u>Meteorites</u> → Meteors that reach the surface of the Earth.</p>	1+1	2

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4	b) Big-Bang hypothesis - 13.7 Billion years - Great explosion - The Universe emerged from a single point - singularity. (Any relevant point on Big-Bang)	2	2
5	a) Era b) Cambrian	1 1	2
6	a) <u>Degradation</u> → Lowering of elevation of high land by removing materials by natural agents. <u>Aggradation</u> → Levelling up of low land by depositing or filling materials by natural agents <u>Gradation</u> → It is the process by which higher areas are reduced and depressions are filled up and levelled surface is formed. b) Soil and Regolith are the product of weathering. Soil → It is the unconsolidated material at the surface of the earth that support plant growth	2	2

-1-

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	Regolith → A mantle of rock fragments of varied sizes and composition formed from the underlying rocks.	-1-	2
7.	<p><u>Oxidation</u> → Addition of oxygen with minerals.</p> <p><u>Hydration</u> → Minerals in the rocks absorb water and expand.</p> <p align="center">OR</p> <p><u>Biological weathering</u> → weathering caused by the activities of living organism. It include Root-wedging, bio physical weathering by burrowing animals, bio-chemical weathering by trees and plants.</p>	1 1 2	2 2
8	<p>a) <u>Gully erosion</u> → Soil erosion proceeding through channels on the surface exceeding a depth of 30cm.</p> <p>b) <u>Land Slides</u> → It is the downward movement of soil, regolith, bedrocks etc. under the influence of gravity.</p>	1½ 1½	3

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9	b) Sand Stone	1	1												
10	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;"><u>A</u></td> <td style="text-align: center; width: 33%;"><u>B</u></td> <td style="text-align: center; width: 33%;"><u>C</u></td> </tr> <tr> <td>Aquifer - Sandstone</td> <td>- Porous & Permeable</td> <td></td> </tr> <tr> <td>Aquiclude - clay</td> <td>- Porous but impermeable</td> <td></td> </tr> <tr> <td>Aquifuge - Granite</td> <td>- Neither porous nor permeable.</td> <td></td> </tr> </table>	<u>A</u>	<u>B</u>	<u>C</u>	Aquifer - Sandstone	- Porous & Permeable		Aquiclude - clay	- Porous but impermeable		Aquifuge - Granite	- Neither porous nor permeable.		3	3
<u>A</u>	<u>B</u>	<u>C</u>													
Aquifer - Sandstone	- Porous & Permeable														
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Aquifuge - Granite	- Neither porous nor permeable.														
11	a) Water table b) Karst	1 1	2												
12	<p>Meanders → The Broad sweeping curves found along the course of a stream channel.</p> <p>Erosion takes place on the outer curve or convex bank.</p> <p style="text-align: center;">OR</p> <p>channel depth → Decreases. channel width → Increases channel velocity → Decreases Discharge of stream → Increases channel length → Increases.</p> <p style="text-align: center;">Any three</p>	2 1 3	3 3												

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13	<p>(iv) Alluvium</p> <p>b) <u>Dendritic</u> → The drainage pattern resembling the branches of a tree. 1</p> <p><u>Radial</u> → The drainage pattern in which streams flow in all directions away from a centrally located higher region. 1</p>	1	1
14	<p><u>Deflation</u> → It is the removal of loose particles by the action of wind. 1</p> <p><u>Abrasion</u> → Mechanical wearing down of rock surfaces by the grinding action of wind borne particles. 1</p> <p><u>Attrition</u> → Repeated collisions of grains causing wear their continuous wear and tear. 1</p> <p>OR</p> <p>Sand dunes types -</p> <p>(i) Barchans (ii) Parabolic dunes 1+1+1</p> <p>(iii) Longitudinal dunes (iv) Transverse dunes. 3</p>	1	3
<p>(Explain any or sketch of any three types)</p>			

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	Explanation or Labelled diagram.	4	4
17	a) Tombolo / Bar / Spit Atoll	1	1
	b) Atoll / Coral reef	1	1
18	a) Western Ghats → Residual mountain	1	
	b) The Himalayas → Fold mountain / Tectonic	1	3
	c) The Vesuvius → Volcanic / Depositional mountain	1	
19	a) Evidences to support the continental drift hypothesis (i) Fit of continental margins (ii) Fossil evidences (iii) Similarity of rock sequences (iv) Palaeo climatic evidences (Any two evidences)	1+1	2

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20	b) Physical properties of Minerals (i) Colour → (ii) Streak → (iii) Cleavage → (iv) Fracture → (v) Lustre → (vi) Specific gravity → (vii) Hardness → (Any four physical properties with example)	1+1+ 1+1	4.