

ANSWER KEY FIRST YEAR HIGHERSECONDARY EXAMINATION SEPTEMBER 2021 PART III MAX: 60 SCORES				
		SUB: GEOLOGY TIME:2 HRS		CODE:FY 229
Qn. No	Sub Qn	Value Points/Scoring Indicators	Score	Total Score
SECTION I				
1		Mesosphere	1	1
2		Diamond	1	1
3		Relict/Residual/Erosional Mountains	1	1
4		Sea Level/Base Level /Ultimate Base Level	1	1
5		Mars	1	1
6		Oceanography/Marine Geology	1	1
7		Magnetism/Magmatism(<i>for Malayalam version</i>)	1	1
8		Aeolian/Aeolian Deposits	1	1
			1X8=8	
SECTION II				
9		The scientific theory of the evolution of the universe. Started about 13.7 billion years ago. Concentrated at a single point-Singularity, expanded rapidly with a tremendous explosion.Time and space created in Big Bang event.Universe is expanding.Two points	2	2
10		Porosity: The amount of pore space present in the rocks//formula for porosity measurement	1	2
		Permeability : The ability of rocks to transmit water	1	
11		Cleavage: The tendency of a mineral to break along certain definite directions.	1	2
		Fracture: The nature of the surfaces that form when a mineral breaks in a direction other than that of cleavage.	1	
12		Warming of earth's atmosphere due to the penetration of sunlight. The heat is absorbed by the greenhouse gases ie, carbon dioxide, methane etc . Heat is then radiated back towards the surface of the Earth./Global warming as a result of industrialisation etc.Two points	2	2
13		The processes that takes place on the surface of the earth. Eg:Weathering and erosion	2	2
14		Stream valley , potholes, waterfall, gorges & canyons or defintion of any two	2	2
15		String or chain of volcanic islands formed by tectonic activity. Example: Japanese islands	2	2
16		The record of Earth's magnetic field preserved in rocks. Revelal in earth's magnetic field in the geologic past.	2	2
17		Formed by faulting .It is also known as block	2	2

		mountains. These are formed the result of tensional force.The up thrown blocks are called Horsts and the downthrown blocks are called Graben.Example.Sierra Nevada (two points)		
18		Mining, ground water exploration , Disastermanagement, civil engineering , environmental protection,understanding earth processes etc/scope of geology/various branches of geology/geological organisations	2	2
19		These are important wind deposits. Loess:wind deposits formed by fine particles (silt and clay) Sand dunes: conical or asymmetrical mounds or ridges of sand deposits	1+1	2
20		Climate, Vegetation, Topography, Nature of rocks ,Human activity,Time/products of weathering (soil and regolith)/relevant responses regarding the topic	2	2
			2X5=10	
SECTION III				
21		Mountain Glaciers: form in high mountains/confined to mountain valleys.	1	3
		Continental Glaciers : largest types of glaciers. Form in high latitudes, larger in dimension.	1	
		Ice Shelves : glacial ice found floating on water forming a seaward continuation of a land glacier.	1	
22		The endless circulation of water through the different geospheres in solid, liquid and gaseous forms. Process:1. Precipitation 2. Surface run-off 3. Infiltration 4. Base flow 5. Evaporation 6. Transpiration 7. Condensation 8.Interception/Explanation of processes/ Illustration (marked diagram)	3	3
23		Interface concept and universality of change-changes occur at the boundaries among various spheres. Example weathering starts at the interfaces of land water and atmosphere.Changes within the earth system are brought about by flow of energy across interfaces. How rapidly the changes occur determines the degree of discontinuity or the sharpness of the interface.	3	3
24		Diagram of a soil profile.Marking of A,B.C and D horizons or description of atleast 3 horizons	3	3
25		System of chronological measurement used to relate the timing and relationships between events that have occurred during the earth's history. Major units of GTS	3	3

		-Eons,Eras,Periods and Epochs														
26		Any three terms used to denote habit of the minerals such as tabular,fibrous,foliated,bladed/three terms to denote crystal forms/three examples/any other relevant responses regarding the topic	3	3												
27		Kast topography is an irregular topography. Developed in limestone terrain by the action of ground water.Many sink holes caves etc noticed. Well exhibited in the Karst region of Yugoslavia	3	3												
28		Names of three types of major weathering/Names of three types of physical or chemical weathering/name and explanation of any one type of weathering	3	3												
29		Meteors: Streak of light appears when celestial bodies enter in the earth's surface . Meteorites :Incompletely burnt meteors reaching the earth's surface	3	3												
30		Explanation of Troposphere,Stratosphere,Mesosphere and thermosphere/Illustration (marked diagram)	3	3												
31		<table><tr><td>A</td><td>B</td><td>C</td></tr><tr><td>ONGC</td><td>Petroleum exploration</td><td>Dehradun</td></tr><tr><td>GSI</td><td>Earth survey and exploration</td><td>Kolkata</td></tr><tr><td>NRSC</td><td>Remote sensing</td><td>Hyderabad</td></tr></table> Matching of any three columns,viz either A to B or A to C or B to C shall be considered	A	B	C	ONGC	Petroleum exploration	Dehradun	GSI	Earth survey and exploration	Kolkata	NRSC	Remote sensing	Hyderabad	3	3
A	B	C														
ONGC	Petroleum exploration	Dehradun														
GSI	Earth survey and exploration	Kolkata														
NRSC	Remote sensing	Hyderabad														
32		Names of three stages in the evolution of stream valleys (Youth stage,Mature stage and Old stage)/names of any three riverine land forms or features found along stream channels/any relevant responses regarding the topic.	3	3												
			3X6=18													
SECTION IV																
33		Definition of degradation,aggradation and gradation with examples/Detailed description of any two	4	4												
34		Description of continental shelf, slope,abyssal plain, ocean ridges , trenches , island arc etc/ marked diagram	4	4												
35		Proposed by Immanuel Kant and Laplace-solar system evolved from a large cloud particles called nebula. Part of this cloud of dust and gas underwent gravitational collapse to form a disc shaped solar nebula-later evolution to solar system	4	4												
36		Explanation of drainage patterns/diagram or explpanation of drainage basin/diagram	4	4												
37		Meaning,definition or description of hardness and hardness scale /detailed hardness scale.	4	4												
38		Downslope movement of earth materials under the	4	4												

		influence of gravity. Types: creep, falls , avalanches etc or description of any two		
39		Significance of geology and earth sciences/four major areas of earth sciences/importance of geology/branches of geology/geological institutions/relavant responses regarding the topic geology	4	4
40		Illustration or explanation of meanders or ox bow lakes	4	4
41		Continent were once joined to form a super continent pangea-pliting and drifting to present day continents and oceans-propsed by Alfred Wegener Evidences : Fit of continents, fossil evidence , similarities of rock sequences, palaeoclimatic evidence or views against the hypothesis.	4	4
42		Definition and conditions to be required to consider a material as mineral/classification/physical properties of minerals/uses of minerals/other relavant responses regarding minerals	4	4
43		Definition and requisites of a mineral to be considered as a gemstone. Two examples:Diamond, ruby, emerald,sapphire etc	2+2	4
44		Modes of stream transportation /types of stream load/fluvial processes/features of fluvial processes/other relevant ideas regarding the topic	4	4
45		Names of any three geospheres with brief explanation/name and significance of any two geospheres/detailed explanation of any one geosphere	4	4
			4X6=24	

Final Scheme Prepared By

Sl No.	School Code	PEN	Name	Mobile No
1.	10138	450684	ABOBACKER P	9946229674
2.	14069	452375	BALAKRISHNAN K	9446062874
3.	07024	450402	AMRUTHA B S	9446381161
4.	09088	445312	ANITHA T A	9846991424
5.	08165	556559	SABITHA T SREEDHARAN	9497656715
6.	13127	758522	DHANYA RAJ	9447769944