

ANSWER KEY

SECOND YEAR HIGHER SECONDARY EXAMINATION MARCH 2022

PART-I/II/III

SUBJECT: GEOLOGY

CODE NO: 5429

VERSION: P

60 SCORES

2 HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
<u>A</u> PART - I				
A 1		Granite	1	1
2		Hematite	1	1
3		Anthracite	1	1
4		methane	1	1
5		Focus	1	1
6		Risk	1	1
7		Limestone	1	1
8		Seismogram	1	1
9		Epicenter <u>B</u>	1	1
B 10		Contact metamorphism	1	1
11		Hydrothermal process	1	1
12		Mumbai High	1	1
B 13		Hinge	1	1
PART - II				
A 14		<u>A</u> Ore - As ore mineral from which metal is extracted.	1	2
		Garbage - worthless non metallic mineral associated with ore	1	
15	a)	Calorific value - Amount of heat produced by the burning of standard unit of coal	1	2
	b)	Coalification - conversion of peat into coal	1	

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16		<p>Large ^{mineral} crystal surrounded by small mineral grains, large mineral grain is called phenocryst</p>	2	2
17	a)	<p>Hazard - a situation that poses a level of threat to life, health, property services, socio economic disruption or environmental damage</p> <p>Disaster - serious disruption to the functioning of the community causing wide spread material economic or environmental losses</p>	1 1	2
18		<p style="text-align: center;"><u>B</u></p> <ul style="list-style-type: none"> * Keep calm and quickly move to higher ground away from the coast * prepare for a tsunami emergency * Never go down beaches at the time of tsunami * Stay out of danger until an ALL-CLEAR is issued by authority * Give full cooperation to government rescue agencies * Do not stay in houses located in low lying areas 	2	2
19		<p>1) Circum pacific belt 2) The mediterranean and Trans-Asian Himalayas belt.</p>	2	2
20		<p>primary effect - occur as a result of the Earth process itself eg: damage due to flood; collapse building due to earthquake</p> <p>Secondary effects - occur only because of primary effect eg Fire due to earthquake.</p>	2	2

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21		<p><u>A.</u> PART II</p> <p>Mud cracks - Sedimentary structure formed drying out of wet sediments</p> <p>Rain drop markings - small and shallow pit created by the impact of rain drops</p> <p>Ripple marks - series of parallel or sub parallel ridges caused by the directional movement of wind and water</p>	1 1 1	3
22		<p>Heat / Temperature Pressure Chemically active fluids</p>	3	3
23		<p>India's Rare Earths Ltd channarayana monazite Kollam</p> <p>Malabar Cements Ltd Walyer Limestone Palaakkad</p> <p>Excel Tiles Industry Akpurtha Quartz Sand</p>	3	3
24		<p>deepening of river channel, river bank erosion, subsidence of river bank, lowering of groundwater table, saltwater intrusion, damage to bridges and aquatic life.</p>	3	3
25		<p>The flow of crude petroleum from the source rock to reservoir rock. until they should be trapped by suitable trap / cap rock</p>	3	3
26		<p>a) Fossilization - process of formation of fossils from the remains of organisms</p> <p>b) i) organisms must have preservable hard parts like bones, and teeth. ii) organisms must be buried rapidly by sediments.</p>	1 2	3

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
27		<p>Normal fault - hanging wall moves up relative to foot wall</p> <p>Reverse fault - hanging wall moves down relative to foot wall</p>	3	3
<p><u>PART IV</u></p>				
<p><u>A.</u></p>				
28		<p>Groundwater pollution - chemicals and fertilizers at leakage from septic systems, dumping of hazardous waste, leakage from storage tanks and landfills</p>	4	4
29		<p>Causes of flooding Excessive heavy rainfall, less infiltration, melting of snow</p> <p>Consequences - damage bridges, collapse of building, destruction of livestock, pet and agriculture land, concentration of garbage, toxic pollutants, cause damage to human life and properties. out break of epidemics, disruption transportation and communication system</p>	4	4
30		<p>Preparedness } Response } Explanations Recovery } mitigation }</p>	4	4
31		<p>Ceramic Industry - making potteries, bath tubs Sanitaries utensils, electric insulating material, tiles, bricks, refractory products Filler in paint, rubber, paper, rubber cement, tooth paste, deodorant powder medicine and making idols</p>	4	4

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32.		<p><u>B</u></p> <p>Recycling - collecting and processing the used items</p> <p>Substitution - Replacement of a very scarce mineral with more abundant one eg. Aluminium is used instead of copper</p>	4	4
33		<p>Shallow focus earthquake - depths 0-70km</p> <p>Intermediate focus earthquake depths 70-350km</p> <p>deep focus earthquake - depth 350-700km</p>	4	
34.		<p>Peat - Carbon content. 55-64</p> <p>Lignite - 72-95</p> <p>Bituminous coal - 84.24</p> <p>Anthracite. - 93.50 (plus explanation)</p>	6	6
35		<p>Rock cycle - Over the course of time rocks can transform one type into another. It shows how the earth's rocks are changed again and again</p> <p>proper diagram</p>	2 4	6
36		<p>Effects on Lithosphere Deforestation, land degradation, land subsidence, land slide, accumulation of quarry waste</p> <p>Effects on Hydrosphere water pollution Aid in drainage, lowering of groundwater table</p> <p>Effects of Atmosphere - Air, noise and sound pollution</p> <p>Effects on Biosphere - damage to habitat and biodiversity.</p>		