Kerala Board

Answer Key

2024

aglasem.com

ANSWER KEY

.....II nd..... YEAR HIGHER SECONDARY EXAMINATION ....March.... 2024

PART-~~I/II~~/III

SUBJECT: .....GEOLOGY.....

CODE NO: **SY 529** VERSION:..R...

..60.. SCORES ....2.... HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
1		Slate	1	1
2		Anthracite	1	1
3		Clinometer / Brunton compass	1	1
4		Seismograph	1	1
5		Pollution	1	1
		Section II		
6		Dike : A tabular wall like igneous intrusion that cut across the structure	1	2
		Sill : Tabular intrusion that parallels the Planar structure	1	
7		Syngenitic deposit : A mineral deposit formed at the same time with the enclosing rock (Any relevant points on plutons)	1	2
		Epigenetic deposit : Those that were formed later than the rock in which they occur	1	
8.		Rock salt and Gypsum were formed by the sedimentary process. They were formed ~~by the~~ as the Evaporite deposits. Evaporites/Sedimentary deposit	2	2
9		Oil trap is a non-porous rock formation that holds the oil pool in place. Mainly the structural traps and Stratigraphic traps Fold trap, Fault trap, salt plug trap etc. are to be mentioned Any two points about oil traps/Examples. or Oil pool	2	2

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
10		The inclination of a structural feature will be the maximum in a direction perpendicular to the strike measured true dip Inclination measured along a direction other than true dip direction is termed apparent dip. The values of apparent dip are always less than that of true dip Any relevant points on structural features	2	2
11		Renewable resources: Resources that can restock or renew with in a lifespan examples: water, living resources, wind, Solar ..etc Non-renewable resources: resources which cannot be replaced after the use Example: Minerals Fossil Fuels (coal, oil etc) Explanation or any two examples.	2	2
12		Engineering approaches (a) channel modifications (b) Retaintion ponds (c) Levees (one or two points) (d) flood gates	1 +	2
		flood plain building codes flood plain zoning flood mapping etc (Any 2 points on Floods)	1	
		Section III		
13		Agents of metamorphism. Heat, pressure, fluid factor Write about Heat and its sources for metamorphism, Lithostatic and Directed pressure, Ion dissolved fluids.	1 + 1 + 1	3
14.		a) Bauxite b) Sphalerite c) Galena	1 + 1 + 1	3
15		Write about lightest to heaviest hydrocarbon Components Natural gas → Methane ethane, Propane, Butane Petroleum → Gasoline, Kerosene Gas oil, Diesel Lubricating oil, Fuel oil, Greases, Asphalt (Any 3 products/components)	3	3

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
16		Saline water intrusion is the movement of saline water into a freshwater aquifer May be due to the over exploitation of ground-water Prevention can be done by a) Reducing pumping b) Relocate wells c) Increase the recharge rate d) Construct impermeable surface barriers (Any 3 points or causes for prevention)	1 + 2	3
17.		a) Shallow Focus Earthquakes: that originate at a depth between 0–70 Kms b) Intermediate focus earthquakes:- That take place at 70–350 kms depth c) Deep focus earthquake: that occur at 350–700 kms depth Explanation	1 + 1 + 1	3
18		Active, Dormant and Extinct Volcanoes Active:-are presently active or have been active at least during the historic time Dormant: The volcanoes which are not active today, known as sleeping volcano. Some of these can be expected to become active again in the future The volcanoes which are geographically extinct and have totally stopped all their activities today are grouped extinct volcanoes (Name or Explanation of 3 types/ Examples) Any 3 points Section IV	1 1 1	3
19		Based on the amount of carbon, oxygen hydrogen, nitrogen water and volate matter the coal can be classified into Peat, lignite, Bituminous coal Anthracite. Give 3 compositional characteristics for each (Name or Explanation)		4

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
20.		Types of Folds. Anticline: Convex upward fold Syncline: Convex downward fold Symmetrical: Axial plane is vertical Assymetrical: Axial plane is inclined overturned fold: In which limbs dip in the same directions Recumbent fold: Horizontal or Sub-horizontal axial plane Isoclinal Fold: limbs are essentially parallel to each other. (Any Four type in detail) / Exeplanation of folder Figure.		4
21		Green house effect and Global warming → Write about naturally occuring greenhouse gases in the atmosphere CO_2, Vapor (H_2O), Methane (CH_4) Ozone (O_3) → Green house gases push to increase the Stably maintained temperature Global warming is defined as an increase in the average temperature of the Earth's atmosphere Consequences of Global warming (in points) → change in ice patterns → Rise of Sea level → Global climatic changes → changes in ecosystems (Any 2 points on Green house effect & Impacts of Global warming 2 points)		4
22		Plate Tectonisms and Earthquakes → The Tectonic earthquakes are [illegible] most common → The Surface of Earth is in continuous slow motion associated with plate tectonic activity. The plates cover the entire surface of the Globe		

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
		convergent, Divergent & Transform fault plate boundaries in brief.		
		Common seismic activities are associated with their highly active zones		4
		Earthquakes occur also in the stable portions — Intraplate earthquakes		
		(Any 4 points on ~~convergent~~ Earthquakes)		
23		Disaster Management cycle.		
		→ Preparedness :— Activities prior to disaster		
		→ Respase : — Activities during disaster		
		→ Recovery : Activities following a disaster		
		→ Mitigations : Activities that reduce the effect of disasters		4
		Give examples or methods for each		
		(Explanation or Figure ~~&~~ Examples)		
		Section V		
24		→ Neat diagram of Rock cycle	3	
		Showing the path from magma to a granite intrusion then metamorphic change — to sedimentary rocks.	+	6
		Explain each rock formation in detail.	3	
		→ Igneous rocks — crystallisation		
		→ Sedimentary — weathering activites		
		→ Metamorphism — Temperature pressure, variations.		
		(Explanation or Diagram)		

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
25.		Modes of fossilization The way in which the organisms was fossilized Methods included:: (i) preservation of unaltered hard parts (ii) Chemical alteration → Permineralisation, → Replacement, → carbonization iii) Imprints of hard parts in Sediment iv) preservation of unaltered soft parts v) Trace fossils or ichnofossils (Any 6 points on Fossilization) or fossils.		6
26		Groundwater may contain some natural impurities or contaminants or by human activities Potential Sources like a) Chemicals and fertilizers b) Septic systems c) uncontrolled hazardous waste d) Storage tanks and land fills e) Atmospheric contaminants Drinking contaminated water can have serious hot health effects such as hepatitis and dysentery, fluoride content related teeth issues ...etc. (Any 6 points on Ground Water contamination)		6

—

1. Balakrishnan.K, HSST Geology
2. RANJITH.T.R HSST Geology
3. SUNILKUMAR.E HSST Geology

27/2/24.

QUESTION PAPERS

GET PREVIOUS YEAR QUESTION PAPERS FOR ALL CLASSES FOR CBSE, ISCSE, ISC AND ALL ALL STATE BOARDS HERE AT AGLASEM.COM

BOARD WISE

- Andhra Pradesh Board Question Papers
- Assam Board Question Papers
- Bihar Board Question Papers
- Chhattisgarh Board Question Papers
- Goa Board Question Papers
- Gujarat Board Question Papers
- Haryana Board Question Papers
- Himachal Pradesh Board Question Papers
- J&K State Board Question Papers
- Jharkhand Board Question Papers
- Karnataka Board Question Papers
- Kerala Board Question Papers
- Madhya Pradesh Board Question Papers
- Maharashtra State Board Question Papers
- Manipur Board Question Papers
- Meghalaya Board Question Papers
- Mizoram Board Question Papers
- Nagaland Board Question Papers
- Orissa Board Question Papers
- Punjab Board Question Papers
- Rajasthan Board Question Papers
- Tamil Nadu Board Question Papers
- Telangana State Board Question Papers
- Tripura Board Question Papers
- Uttarakhand Board Question Papers
- Uttar Pradesh (UP) Board Question Papers
- West Bengal (WB) Board Question Papers