1/8

FIRST YEAR HIGHER SECONDARY EXAMINATION MARCH 2019

SUBJECT : GEOLOGY **CODE. NO: FY 29**

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
1	(a)	Petrology	1	2
	(b)	Palaeontology	1	
2		NCESS / CESS / CWRDM / Kerala State Ground water dept / Kerala State Mining and Geology Dept. (any two geological dept. in India)	2	2
3	(a)	Geoid / oblate ellipsoid / oblate.	1	2
	(b)	Streak	1	
4.		Metallic :- Metallic Shine or lustre Vitreous :- Glassy shine / lustre Or one example each	1 1	2
5		Effects of temperature variation, alternate heating and cooling, repeated expansion and contraction, rupturing of layers of rocks Or differential heating and cooling due to poor conduction of heat by rocks.	2	2
6		Fit of continental margin Palaeo climatic and glacial evidences fossil evidences Similarity of rock sequences and structural features (any two points)	2	2

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
7		Alternate strips of magnetic normal and reversed polarity, youngest rocks are situated at the ridge crest, age of crest increases with distance away from the ridge, Spreading of sea floor away from the ridge coest, etc Or. (Any two points regarding palaeo-Magnetism and seafloor spreading)	2	2
8		Civil engineering, ground water prospecting, mineral exploration and extraction, global climatic changes, environmental management, disaster management, understanding earth processes etc. Or Any three points on Scope of Geology / branches of Geology	3	3
9.		Big Bang, Hubble's Law, Singularity, expansion of the universe, red shift, final rewinding, big crunch.....Or Any two relevant points on Big bang theory	3	3

3/8

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
10		(a) Deposition / windward / Leeward / wind action	1	3
		(b) Depressions formed by deflation or erosion / blow Out / Oasis / Depression	1	
		(c) Ventifacts / Polished pebbles / faceted pebbles	1	
11		Drainage basin :- Total area drained by a river (Definition)	1	3
		Diagrammatic representation of major stream/ trunk stream / tributaries / distributaries	2	
		Drainage divide; Head, mouth, source Or Diagram only two marks		
12	(a)	Mount Vesuvius / Etna / Fuji / Barren Islands	1	3
	(b)	Himalayas / Applachians / Rockies / Alps/Andes	1	
	c	Western ghat / Eastern ghat / Vindyans / Satpuras / Aravalli	1	
13		Guyots – Flat topped – Mounts	1	3
		Submarine Canyons – V-shaped valleys	1	
		Sink holes – cylindrical Depressions	1	
		(A to B / A to C / B to C)		

4/8

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
14		Chemical :- Crust, mantle, core OR Physical :- Lithosphere, Asthenosphere, upper mesosphere, Lower Mesosphere outer Core, inner Core Or Diagram – 1, Diagram with labelling 1+2 Description only – 3	1 2	3
15	(a)	~~Mount~~ Troposphere :- Lower sphere, Decrease in temperature with height weather phenomenon, 18–20 km average height, tropopause etc	1	3
	(b)	Stratospere :- Increase in temperature with altitude, horizontal and little turbulent air, ozone, ozonosphere, Stratopause at about 50 km above the Surface of the earth.	1	
	(c)	Thermosphere :- Directly above the mesosphere, increased temperature, electrically charged air particles / ions Temperature up to 2000 Or Any one relevant point on each layer	1	

5/8

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
16		Reforestation, Injection recharge, Rainwater harvesting, Retention points, Check dams, Ditches and furrows (Any three means of Artificial recharge)	3	3
17	(a)	Clay – brick Emerald – Gemstone Bladed – Habit (Any one Correct pair 3 marks Malayalam version is not clear)	3	3
18	(a)	1 / Low / medium	1	3
	(b)	7	1	
	(c)	35 / 3.5 / 350	1	
19		Mass wasting – Downslope movement of rock/ Debris / under the influence of gravity (definition)	1	3
		Any one point on masswasting		
		Types :- Creep, falls, flows, Slides, Topples, avalanches – Name of any two types	2	
20		Internal :- Processes that are originated within the earth's crust	1	
		Eg: Magmatism metamorphism, Diastrophism (orogeny and epierogeny)	1	
		(one example)		

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
20		External : processes that are originated above the earth's surface, Solar powered	1	4
		Eg : Degradation and aggradation (gradation) weathering, erosion, mass wasting, deposition. (One example)	1	
21	(a)	Porosity :- Amount of openings present in rocks	1	4
	(b)	permeability :— Ability of a rock to transmit water through it, depends on interconnection between porespaces	1	
	(c)	water table :- Upper surface of zone of groundwater saturation, topmost level of groundwater in unconfined aquifer / water level in the well.	1	
	(d)	Aquifer : Rock Unit which holds and transmits water freely, porous and permeable rocks eg : — Sandstone, Alluvium / Gravel Or One eg: is enough	1	
22		Meander bends and oxbow lakes :— Result of lateral erosion and deposition in a zig zag river valley, erosion at convex side, deposition at concave bank		

FIRST YEAR GEOLOGY - MARCH 2019 7/8 FY29

Qn No.	Sub Qns	Answer key / Value Points	Score	Total
1		Growth of meander necks, greater discharge of water during floods, straightening of stream course, leaving of isolated loops, complete detachement forming horse shoe-shaped loops. cut off meander.	4	4
		or any four points 4 marks Diagram only 4 marks		
23		Glacial plucking :- Removal of rock pieces mechanically from bed rock by glaciers	1	4
		Glacial Abrasion :- Polishing and rubbing action over bedrocks by the particles carried by glaciers	1	
		Description of erosional Landforms / List of glacial landforms such as Cirque, Arete, horns / cols / Glacial valley / hanging valley	2	
24	(a)	Spit : Built up Sediments or ridges of Sediment extends from baymouth into Ocean.	1	4
	(b)	Bay mouth bar : Spits merge to create bars	1	
	(c)	Tombolo : Land form connecting a mainland and an Island	1	
	(d)	Barrier Island : Sediment accumulation behind the beach Or Any 4 landforms formed by the geological activity of ocean waves.	1	

FIRST YEAR GEOLOGY - MARCH 2019 8/8 FY29

Qn. No:	Sub Qns.	Answer Key / Value Points	Score	Total
25		Lithospheric plate, major and minor plate, motion of the plates Diverging boundaries Converging boundaries Shear boundaries Any 4 Relevant points on plate tectonics	4	4
		[illegible]		