GOVERNMENT OF KARNATAKA

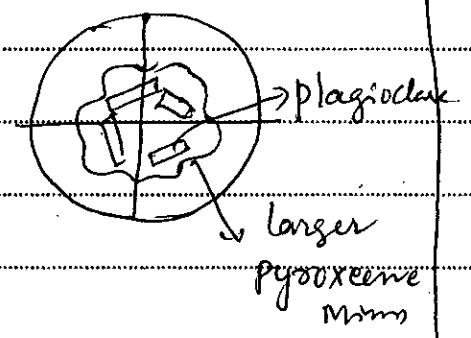
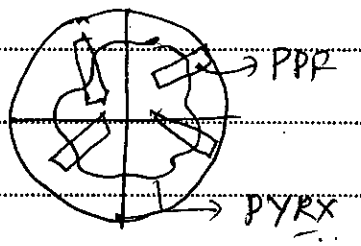
KARNATAKA STATE PRE-UNIVERSITY EDUCATION EXAMINATION BOARD

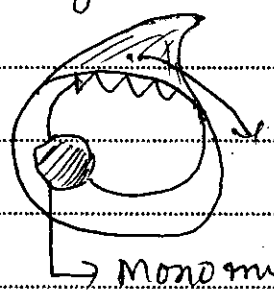
II YEAR PUC EXAMINATION

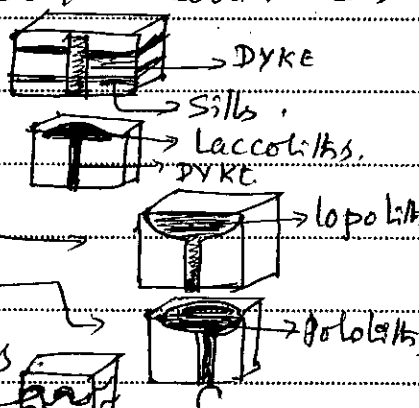
SCHEME OF VALUATION (os)

Subject Code : 37 Subject : Geology

Qn. No.		Marks
I.		
1.	If the rock consists only of category of minerals called Polymineralic Rock.	1
2.	Magma is hot mobile molten silicates of the core	1
3	Metamorphic group.	1
4	Dynamothermal Metamorphism	1
5	Structures are large scale features that can be observed with naked eyes.	1
	Palaeozoic groups → Upper palaeozoic group; → lower palaeozoic	1
6	Umbo is a beak like structure in Pelecypods shells.	1
8.	Dip:- The maximum Amount of Inclination of Rock bed is called dip. Dip has an elements like, (1) apparent dip (2) True dip (3) Dip direction (4) Dip amount	1

Qn. No.		Marks
9	Calyx are the plate like structures surrounded around the mouth of the coral.	1
10.	Langullela. Obellela. Productus, Spirifer	1
11.	Part-B.	
	Ophitic texture	Sub-Ophitic tex:
		
	(1) Incase of ophitic tex:- the larger pyroxene mineral enclosed the smaller PPF minerals	
	(2) In case of Sub-ophitic tex → the PPF. minerals are partially embeded in large Pyx mineral.	2m
12	(3) Igneous Volcanic Rocks	
	(2) Igneous-Hypabyssal Rocks	
	(1) Igneous plutonic rocks	2m
13	primary Strs of Sedi-Rocks:	
	(1) current bedding (6) Tracks & Trails.	
	(2) Torrential bedding (7) Syneresis/	
	(3) Cross bedding. Mudcracks	
	(4) Ripple marks.	2m
	(5) Rain prints.	

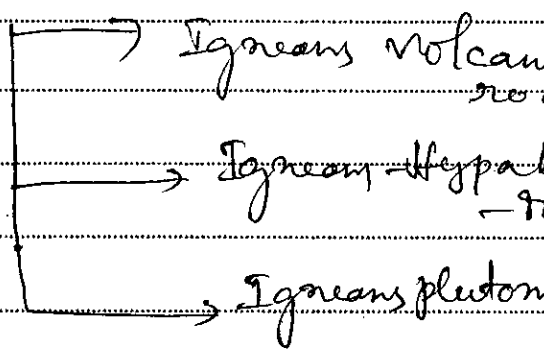
Qn. No.		Marks
14.	Major Structures of earth crust —	
	(1) folds (2) Faults (3) Joints (4) Unconformities	2m
15.	porphyritic texture - Ex:- (1) Granites	
	(2) Basalt.	2m
16.	Hinge area :- It is an Triangular area in ~~Brachiopods~~ Pelecypods shell in inner side of the Dorsal valve.	
	 Hinge area.	2m.
	Monomyaria. (Aductor impression)	
17.	If an pelecypod shell has only one aductor - impression is called monomyaria.	2m
18.	Principles of Stratigraphy :- (Major principles)	
	(1) Principle of orogeny	
	(2) Principle of Epirogeny	2m
19.	Cataclastic rocks are the best examples for Dynamometamorphism. In which they the rocks subjected to the metamorphism the rocks underwent multiple fracture and disintigrated rocks like, Breccia, Mylonites, Hornfels.	2m
20.	Thin bedded Strs of Sedimentary formation that appears to a single bed. This kind of formation is called Laminations.	2m
21.	Conglomerate :- It belongs to Rudaceous group Rocks The rocks formed by Rounded -	

Qn. No.		Marks
	- quartz pebbles with silica gel is called conglomerate.	
	Breccia:- Angular quartz pebbles with cementing material.	2m
22.	Peninsula is triangular shaped stable land mass is called peninsula.	
	eg:- South Indian land mass.	2m
	Part- C	
23.	If the magma is unable to cut across the country rocks called Concordant rocks.	
	eg:- (1) Sills.	
	(2) Laccoliths.	
	(3) lopoliths.	
	(4) pololiths.	
	(5) phacoliths	
		
	Note (1) Diagrams carries 2 marks [Diagrams must]	
	(2) Explanation Carried 3 marks.	5m
24.	Diastrophism is an ecological imbalance in ecosystems leads to the development of Hazardous activities upon the earths planet. (1) Principles of orogeny	
	(2) Principles of Epirogeny.	
	(3) Principles of Cataclysm.	5m

Qn. No.			Marks
IV 25.	Lamellibranchs.	Brachiopods:	
(1)	Molluses belongs to Lamellibranchs. These are Soft bodied organs	1. These are Bivalves marine organisms (2) The animal passes two Unequal valves (Brachial & Ventral valves)	
(2)	The animal posses two equal & equivalent valves (Right & left val.)		
(3)	The valves are held together by means of ligament.	(3) The valves are held together by means of Teeth & Socket system	
4.	The shells posses beak-like str. — called umbo.	(4) Umbo is absent in B'pods.	
5.	Hinge area present	(5) Hinge area is absent	
(6)	Pedicle opening is present	(6) No brachial or pedicle opening.	5m.

[each point carrying one mark]

26 Igneous Rocks classification: based on Cooling, Crystallization & Magma.



Classification → Correct — 2m.
explanation → Correct — 3m

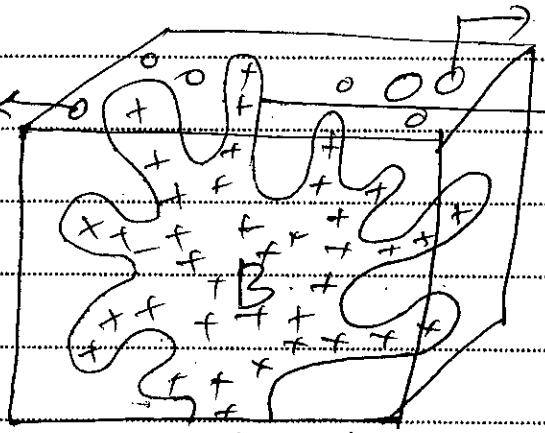
5m

Qn. No.		Marks
29	Morphological characters of gastropods:	
	1. These are marine univalved organs	
	2. They are both aquatic and terrestrial forms.	
	3. The univalves posses coiling nature with screw like appearance	
	4. The chambers are interconnected by suture lines.	
	5. The body chamber is larger in which animal can lodge & it meant for entry & exist for the animal.	
	6. The shells are made up of by Caco3 (calcareous shells)	
	7. Each Individual coils called whorls.	
	8. The successive whorls fused by a column like structure called Columella.	
	9. There is an opening (slit) called umbelicus meant for visiting the victims.	
	10. Two types of coiling — (1) Cenestral type (2) dextral type.	5m
	11. Ex:- Snail (Terrestrial) Physa, Lacuntre)	

Qn. No.		Marks
28.	The South India is usually called as peninsula. This is very ancient stable land mass. The rocks are also ancient, Hence they are called archeans crocks. There are many persons worked on these rocks, the Geologists like M. B. Ramachendra Rao C. S. pitchumutha, etc. The archean rocks distributed through South India. All these rocks are under went Metamorphism, oxidation process leads to the development of Basement, Hence Peninsula India is called gneissic complex, Fundamental gneiss or Deccan trap or Deccan plateau. In this land mass, there is complicated Strs, because of ore minerals like, Hematite(Fe) Magnetite(Magnt) Chalcopyrite(Cu) Pyrolucite(Mn), Bauxite(Al) & etc. and other so many Valuable metals like Gold, Platinum & so many non-metals & gem stones, Hence the South India is called mineral rich province.	5m

Qn. No.		Marks
29.	Carboniferous period:- Abendance of plants like, angiosperms, seedbony plants and animal life caunk int coalfarmes, Abendance of Amphibians In this periods no of coal bearing beds deseemd. Coals deposits Rain gang area are equivalent of Carboniferous period, Gonda-vonda land is symbolic for the Carboniferous period,	5m
30.	Describe:-	
	(1) Gneiss: This rocks is an example for Metamorphic group of rock. Basically it is a granite rock. When granite is subjected to the Thermal metamorphism granite has been converted into gneiss. It shows banded nature, it is an rich host for gold deposits.	
	Granite $\xrightarrow[\text{M.M., Temp}]{\text{Contact}}$ gneiss.	2½
	(2) Trachyte:- It is best example for the Igneous group of Igneous volcanic rock, Trachytes are formed by the volcanic erruptions. The rocks contains quartz felspar & other accessory minerals	5m 2½

Qn. No.		Marks
VI 31.	Batholith :-	



(1) Diagrams — correct — 2m.
(2) Explanation —11— 3m. 5m

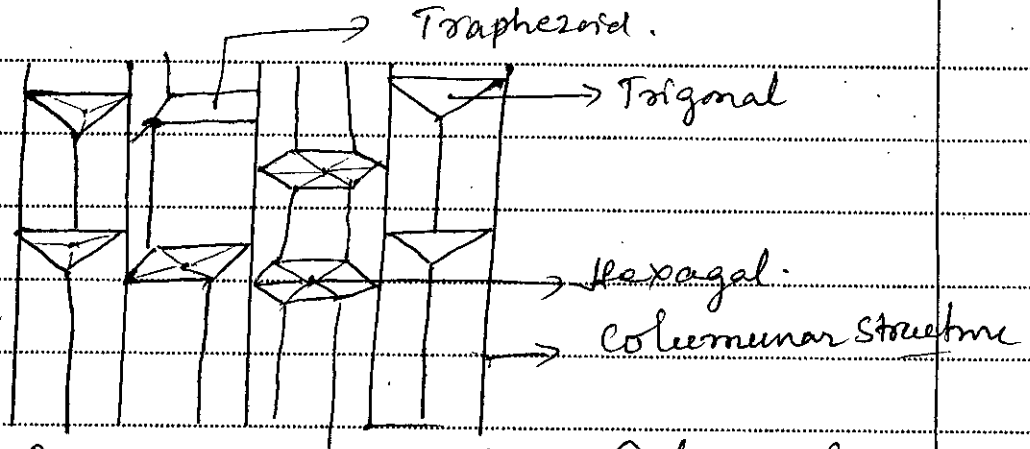
Batholiths are larger dimentions horizontally creeping bed rock, they are hard, compact, irregular mass below the earth's crust. The structure develops because of slow cooling of Magma near the magmatic chamber. They forms to a Serial Kms. These rock are usually granites, granodiorite shows clear cut joints because of presence of PPF mineral.

These are having a commercial value for Road metalling, flooring and other decorative purposes. Construction of Dams, bridges & Tunnels.

Qn. No.		Marks

32 Describe:-

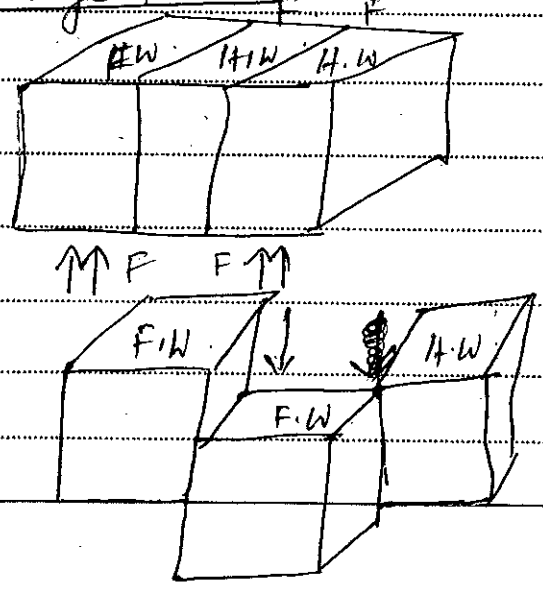
(A) Columnar joints:-

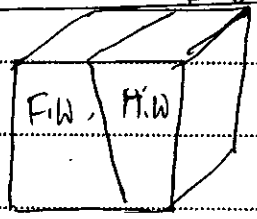
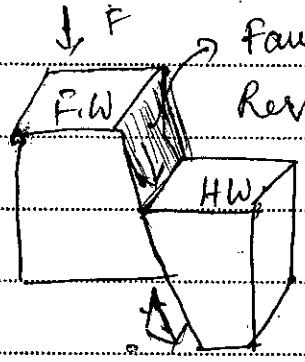
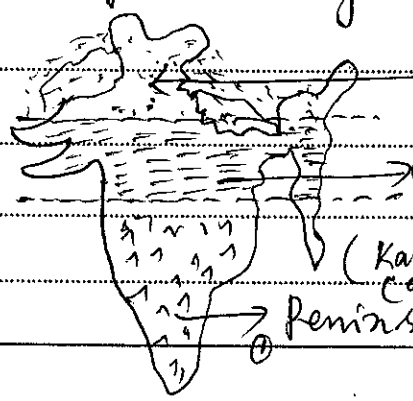


Columnar strs are formed by cooling consolidation of magma. The strs that are formed because of contraction nature of Mass leads to the development of Trigonal, hexagonal, Rhombic & varieties of structures are in the form of column like because of internal forces of minerals which bonding. 2.5

Ex:- Malpe beach.

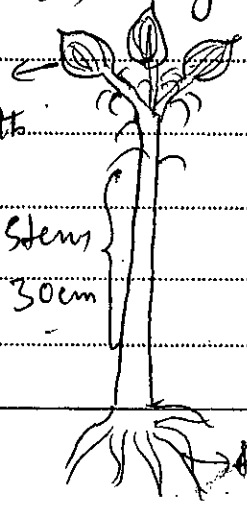
(b) Ridge fault:-



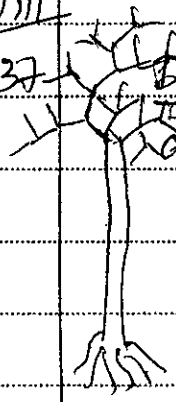
Qn. No.		Marks
	Ridge fault :- It is a type of fault in which series of faults develops within the same granitic rock. In which foot wall remains stationary and Hanging wall slips in between two blocks. But slipped block cannot gets separated that is stick on to the two blocks, that seems to a Ridge. Hence it is called "Ridge fault".	2.5
33	Normal fault : Reverse Fault.	
	 Hanging wall and Footwall cannot move along the fault plane. 2½ m	
	 Fault plane. Reverse Fault. In case of Reverse Fault the Footwall remains stationary and Hanging wall gliding along the Fault line. 2½ m	5m
34.	Tripartite physiographic divisions of India.	
	 Diagrams – carries – 2m explanation – 3m	5m

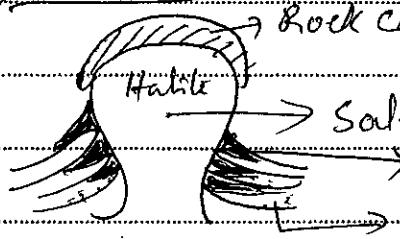
Qn. No.		Marks
VII		
35	Deformations: (1) Rain prints:- Some of the impressions or markings develops upon the soft sediment due to the impact of Rain drop. Such impressions are called Rainprints.	2-5
	(2) Torrential bedding:- Due to the flowing river's actions, some of the pri-sms develops on soft sediments. These markings stands upon turbidity water currents. The water currents left the bigger particles of Sand & leads to the developmt of such stes. These stes indicates the flowing directions of water Currents within sediments after consolidation.	2-5
36	Types of Metamorphism: 1. Contact / Thermal metamorphism 2. Regional metamorphism 3. Dynamo thermal metamorphism, (1) Causing of M.M → carries-2m. (2) Explanation → carries-3m.	5m
*	Part-D:	
IX 39 (a)	Describe:- (1) Residual Rocks:- Biggers residual particles with silica get lead to the formation of Rocks called Residual Rocks, or Mechanically formed Rocks. Ex:- (1) Conglomerate (2) Breccia.	4m

Qn. No.		Marks
	(a) Cambrian :-	
	The palaeozoic group has been divided into ~~three~~ two sub groups. —	
	Palaeozoic → upper palaeozoic — Permian, Carboniferous, Devonian	
	Palaeozoic → lower palaeozoic — Silurian, Ordovician, Cambrian	
	Cambrian is the geological age for the lithological formation during geologic past. The name Cambria is the village in Kashmir area ~~showing~~ this age ~~no~~ of trilobites came into existance and left their fossils Hence all the left behind the salane beds; that all remains of Trilobites preserved as fossils. Hence Cambrian is called as age of Trilobites 4m.	4m
	(b) Sigillaria :- It is a tree like plant fossils with trichotmous branching with club like leafsheaths. There is no proper roots, but roots Rhizoids. the Stem is cylendrical that grows upto an hight of 30 cms. That is entair plant is preserved as a fossil.	2m
	Age :- Carboniferous (2m)	[10m]



Qn. No.		Marks
40.	(a) Porphyritic tex: (b) Angular unconformity (c) gaseous transfer. (a) Prophyritic tex → definition 2 marks explanation 2 mar (b) Angular unconformity definition — 2 marks explanation. 2 Marks (c) gaseous transfer — Definition explanation	4 4 2 (10 m)
* VIII	Note:- Correct the serial no of question after 36th question.	
37	Describe:- (a) Lepidodendron: It is a tree like plant fossils with dichotomous branching extaxon plant is preserved as a fossils ex: gondawan land/ Rocks.	2.5
	(b) Glossoptris flora:- A seeries of plants of pteridophytes plants that were existed in groups. all groups of plants preserved as fossils ex:- Ortosoptris, gangamoptris, Alithoptris, Neuraoptris, plecoptris ext.	2.5



Qn. No.		Marks
38	(a) Salt domes :-	
		
	↑↑↑ Intrusive Halite	Fig – carves. } 2½ explains – carves }	2.5
	Salt domes are plug like bodies of intrusion of salt in the floor of ocean. They are indicatory of "oil deposits".	
	(b) Basins :- Basins are the types of folds in which all the beds dips away from the core.	2.5
	Fig – } 2½ m explain }	[5m]
	Part – E	
X	Descriptive Answers :-	
41	Mesozoic group (classification) – 2m } (explanation – 3m }	5m
42	Descriptive answer : Role of Joints in Dams construction :- (1) Joints should be free from rock beds (2) Avoid the weathered area of Rocks (3) Jointed rocks should be completely excavated in dam site.	5m
	(4) Reconnaissance survey is must.	

Qn. No.		Marks
43.	Descriptive Answers:-	
	Visiting Mine as a feildtrip:	
	Explainations carries - 5m	5m
	x x x x x x x x x