

Earth Sciences Modular (GLI 101)
End Semester Examination (Applied Geology Part)
Session: 2022-2023; Monsoon Semester

Total Marks: 100

Time: 03 Hours

Read all instructions carefully, mentioned in each question

Q1✓	Define an Aquifer. How it differs from aquifuge and aquitard in terms of its porosity and permeability. Discuss & differentiate between the geological conditions required for the formation of confined and unconfined aquifers with suitable diagrams.	(2+3+10=15)
Q2✓	<p>a. Differentiate between the following:</p> <ol style="list-style-type: none"> 1. Artesian well and artesian spring 2. Ground water table and potentiometric surface 3. Hydrosphere & Cryosphere 4. Continental glaciation & Alpine glaciation 5. Lateral moraines & medial moraines <p>b. Illustrate the variations of P and S wave velocities with depth and their significance in understanding the interior of the Earth.</p>	(10+10=20)
Q3✓	Discuss the different plate boundaries and their characteristics with neat sketches and suitable examples.	15
Q4✓	Highlight main differences between the two models of planet building through diagrams, write to the point, detailed paragraphs are not required	20
Q5✓	Differentiate between meteor and meteorite. Why do meteor showers occur? (4+2 marks). Mention any two ways in which meteorites are identified (4 marks). What are the four main types of meteorites? (8 marks). Write the impact energy of a meteorite if its diameter is 400 m (proper units of energy should be mentioned) (2 marks)	20
Q6✓	Calculate the phi value of following and define the sedimentary rock a) 256 mm b) 64 mm c) 6mm d) 4mm	(8+2=10)