

Reg. No.:



Name:

University of Kerala

U9303

Second Semester FYUGP Degree Examination, April 2025

Multi-Disciplinary course

GEOLOGY

UK2MDCGLY121 - Earth Materials

Academic Level: 100-199

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	Identify whether each statement is True or False : Wind-blown desert sands are more texturally mature than glacial deposits	RE	3
2	Slaty cleavage is most commonly found in which metamorphic rock? Options : A)Quartzite B)Marble C)Slate D)Hornfels	RE	2
3	The ability of a mineral to glow under ultraviolet light is called: Options : A)Luminescence B)Fluorescence C)Phosphorescence D)Play of colors	UN	1
4	Which of the following best explains why quartzite is harder than its parent rock, sandstone? Options : A)Quartz grains dissolve and reform as calcite B)The rock undergoes compaction and cementation C) Heat and pressure fuse quartz grains together during metamorphism D)Sandstone naturally hardens over time without metamorphism	UN	2
5	True or False : The packing of sediment grains has no effect on the overall stability of the sedimentary rock.	UN	3
6	What type of crystallinity does Glass represent?	UN	2

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Match the following	UN	2

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	<table><tr><th>Group I</th><th>Group II</th></tr><tr><td>1. Granite</td><td>a) Fine-grained felsic volcanic rock</td></tr><tr><td>2. Rhyolite</td><td>b) Coarse-grained mafic intrusive rock rich in pyroxene and plagioclase.</td></tr><tr><td>3. Syenite</td><td>c) Coarse-grained felsic intrusive rock with low quartz content.</td></tr><tr><td>4. Gabbro</td><td>d) Coarse-grained felsic intrusive rock with high quartz content.</td></tr></table>	Group I	Group II	1. Granite	a) Fine-grained felsic volcanic rock	2. Rhyolite	b) Coarse-grained mafic intrusive rock rich in pyroxene and plagioclase.	3. Syenite	c) Coarse-grained felsic intrusive rock with low quartz content.	4. Gabbro	d) Coarse-grained felsic intrusive rock with high quartz content.		
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8	Explain the four key differences between Gneissic banding and schistosity in metamorphic rocks		UN	2									
9	Imagine you are a geologist exploring a region with both laccoliths and lopoliths. How would you differentiate between them in the field based on their shape and formation process?		AP	2									
10	What is metamorphism, and write three factors control the metamorphism		AP	3									

Part C. 28 Marks. Time: 60 Minutes (Cognitive Level: Apply (AP)/Analyse (AN)/Evaluate (EV)/Create (CR)) Long Answer: 7 marks each. Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A) What are the key differences in texture and mineral composition between Granite, Gabbro, Pegmatite? OR B) Illustrate how the characteristics of mudrocks apply to environments with intermittent drying, and explain why they are sometimes called desiccation rocks.	AP	2, 3
12	A) Analyze what are flute marks in sedimentary rocks and the process by which they form OR B) What are the electrical and magnetic properties of minerals? Provide examples.	AN	3, 3
13	A) Define a mineral and explain its essential characteristics OR B) Investigate how the key morphological features of sedimentary rocks are used for interpretation or as geopetal indicators in reconstructing past depositional environments.	EV	3, 3
14	A) . Discuss the concept of luster in minerals and its types.	CR	3, 3

Qn No.	Question	CL	CO
	OR B) Synthesize the metamorphic processes ?. Explain the texture and mineralogy of four metamorphic rocks		