Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – MAY/ JUNE 2025

Date: 03-06-2025 **Time:** 01:00 pm – 04:00 pm

School: SOE	**Program:** B. Tech-CIV	
Course Code :CIV2008	**Course Name:** Engineering Geology	
Semester: II	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**14**	**50**	**36**	**-**	**-**

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. **10Q x 2M=20M**

1.	What are *S-waves*?	**2 Marks**	**L1**	**CO1**
2.	Name the layers of earth crust	**2 Marks**	**L1**	**CO1**
3.	List the processes involved in the origin of igneous rock.	**2 Marks**	**L1**	**CO2**
4.	What is Liquid immiscibility?	**2 Marks**	**L1**	**CO2**
5.	What is thermal metamorphism? Give an example.	**2 Marks**	**L1**	**CO2**
6.	Define aquifer with an example	**2 Marks**	**L1**	**CO2**
7.	Define folds.	**2 Marks**	**L1**	**CO2**
8.	Name the components of GPS.	**2 Marks**	**L1**	**CO3**
9.	Define GIS.	**2 Marks**	**L1**	**CO3**
10.	Give an example each for land cover and land use.	**2 Marks**	**L1**	**CO3**

Part B

Answer the Questions. **Total Marks 80M**

11.	**a.**	Friedrich Moh's has created a hardness scale for minerals, commonly known as Moh's scale of hardness. Tabulate a series of ten minerals according Moh's scale of hardness.	**10 Marks**	**L2**	**CO 1**
		Or			
12.	**a.**	The triangulation method is one of the best methods to determine the epicenter location of earthquake. Interpolate the triangulation to locate the earthquake epicenter.	**10 Marks**	**L2**	**CO 1**
13.	**a.**	Metamorphic rocks formed primarily due to changes in factors like temperature, pressure and the introduction of chemically active fluids. Discuss the types of metamorphism based on pressure and temperature factors.	**10 Marks**	**L2**	**CO 2**
		Or			
14.	**a.**	The sedimentary rocks were formed due to the operation of processes like weathering, transportation, deposition and compaction. Classify the sedimentary rocks based on mode and mechanism of accumulation and consolidation.	**10 Marks**	**L2**	**CO 2**
15.	**a.**	Biological weathering involves the role of plants and animals in the breaking down of rocks through mechanical ways as well as in the decomposition of rocks. Explain the main processes involved in biological weathering.	**10 Marks**	**L2**	**CO 2**
		Or			
16.	**a.**	The natural processes of soil formation are very slow and are mainly depends upon combination of several factors. Explain the contribution of any three factors in the formation of soil.	**10 Marks**	**L2**	**CO 2**
17.	**a.**	Faults are classified on the basis of different principals. Depict the classes of faults based on the type of displacement along the fault plane and relative movement of foot wall and the hanging wall with sketch.	**10 Marks**	**L3**	**CO 3**
		Or			
18.	**a.**	Usually folds are classified on the basis of upward or downward bend and symmetrical characteristics. Classify the folds with figure.	**10 Marks**	**L3**	**CO 3**
19.	**a.**	Sea water intrusion is the movement of sea water into the fresh water aquifers due to natural processes or human activities, which can lead to contamination of fresh water. Illustrate the causes of sea water intrusion with suitable remedial measures to control it.	**20 Marks**	**L3**	**CO 2**
		Or			
20.	**a.**	Sedimentary rocks often have a layered structure, while metamorphic rocks can exhibit foliated textures (lines or bands)	**20 Marks**	**L3**	**CO 2**

		or be non-foliated. Illustrate the processes involved in the origin of sedimentary and igneous rocks.			

21.	**a.**	GPS (Geographic Information System) provides location data, while GIS (Global Positioning System) uses that data to analyze, visualize, and manage spatial information. Illustrate the applications of GIS and GPS.	**20 Marks**	**L3**	**CO 3**
		Or			
22.	**a.**	Faults are well defined cracks or fractures along which the rock-masses on either side have relative displacements. Illustrate the neat sketch of fault with all terminologies and engineering consideration of it.	**20 Marks**	**L3**	**CO 3**