



# PRESIDENCY UNIVERSITY

BENGALURU

Roll No.																			
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## Make Up Examinations – December 2025

Date: 27-12-2025

Time: 09:30am – 12:30pm

<b>School:</b> SOE	<b>Program:</b> B. Tech	
<b>Course Code :</b> CIV2008	<b>Course Name:</b> Engineering Geology	
<b>Semester:</b> MK	<b>Max Marks:</b> 100	<b>Weightage:</b> 50%

CO - Levels	C01	C02	C03	C04	C05
<b>Marks</b>	<b>14</b>	<b>50</b>	<b>36</b>	-	-

### 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 body-waves?	2 Marks	L1	C01
2.	Name layers of earth mantle	2 Marks	L1	C01
3.	What are sial and sima?	2 Marks	L1	C02
4.	What is sedimentary rock?	2 Marks	L1	C02
5.	What is mafic igneous rock?	2 Marks	L1	C02
6.	What is aquitard? Give an example	2 Marks	L1	C02
7.	Differentiate vadose water and ground water.	2 Marks	L1	C02
8.	What is photointerpretation?	2 Marks	L1	C03
9.	Define remote sensing	2 Marks	L1	C03
10.	What are hanging and footwall?	2 Marks	L1	C03

## Part B

### Answer the Questions.

**Total Marks 80M**

<b>11.</b>	<b>a.</b>	The triangulation method is one of the best methods to determine the epicenter location of earthquake. Interpolate the triangulation to locate the earthquake epicenter.	<b>10 Marks</b>	<b>L2</b>	<b>CO1</b>
Or					
<b>12.</b>	<b>a.</b>	The travel - time curve is one of the method to determine the epicenter location of earthquake. Interpolate the travel-time graph to locate the earthquake epicenter.	<b>10 Marks</b>	<b>L2</b>	<b>CO1</b>
Or					
<b>13.</b>	<b>a.</b>	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.	<b>10 Marks</b>	<b>L2</b>	<b>CO2</b>
Or					
<b>14.</b>	<b>a.</b>	Based on silica percentage and saturation, igneous rocks are classified into various classes. Differentiate the classes of igneous rocks with examples.	<b>10 Marks</b>	<b>L2</b>	<b>CO2</b>
Or					
<b>15.</b>	<b>a.</b>	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.	<b>10 Marks</b>	<b>L2</b>	<b>CO2</b>
Or					
<b>16.</b>	<b>a.</b>	Rocks can be water-bearing, meaning they readily transmit water have low permeability, or be practically impermeable. Extrapolate any eight clues regarding water bearing properties of rock formations.	<b>10 Marks</b>	<b>L2</b>	<b>CO2</b>
Or					
<b>17.</b>	<b>a.</b>	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.	<b>10 Marks</b>	<b>L3</b>	<b>CO3</b>
Or					
<b>18.</b>	<b>a.</b>	The Global Positioning System (GPS) is a US owned utility that provides users with positioning, navigation, and timing (PNT) services. Illustrate the different segments of GPS.	<b>10 Marks</b>	<b>L3</b>	<b>CO3</b>
Or					
<b>19.</b>	<b>a.</b>	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. <b>Illustrate the</b>	<b>20 Marks</b>	<b>L3</b>	<b>CO2</b>

		causes of sea water intrusion with suitable remedial measures to control it.			
<b>Or</b>					
<b>20.</b>	<b>a.</b>	The vertical distribution of groundwater is characterized by two main zones. Identify the zones and infer with the neat sketch.	<b>20 Marks</b>	<b>L3</b>	<b>CO2</b>
<b>21.</b>	<b>a.</b>	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.	<b>20 Marks</b>	<b>L3</b>	<b>CO3</b>
<b>Or</b>					
<b>22.</b>	<b>a.</b>	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.	<b>20 Marks</b>	<b>L3</b>	<b>CO3</b>