

Roll No																			
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING  
MID TERM EXAMINATION - OCT 2023**

**Semester :** Semester III - 2022

**Course Code :** CIV2008\_v02

**Course Name :** Sem III - CIV2008\_v02 - Engineering Geology

**Program :** B.TECH

**Date :** 31-OCT-2023

**Time :** 11:30AM - 1:00PM

**Max Marks :** 50

**Weightage :** 25%

**Instructions:**

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

**PART A**

**ANSWER ALL THE QUESTIONS**

**(5 X 2 = 10M)**

1. The Earth has a geode shape i.e. flattened at the poles and bulging at the equator. How much is the surface area and mean radius of the earth?  
(CO1) [Knowledge]
2. An earthquake produces several different types of seismic waves namely body waves and surface waves. What are body waves?  
(CO1) [Knowledge]
3. They are two types of body waves namely P-waves and S-waves. Define p-waves.  
(CO1) [Knowledge]
4. Thermal metamorphism is a type of metamorphism. Define thermal metamorphism.  
(CO2) [Knowledge]
5. Rocks are naturally occurring aggregates of minerals. What are igneous rocks? Give any one example.  
(CO2) [Knowledge]

**PART B**

**ANSWER ALL THE QUESTIONS**

**(4 X 5 = 20M)**

6. The mantle is subdivided into four major categories based on the seismic wave characteristics; upper mantle, transition zone, lower mantle and the D layer. Differentiate upper and lower Mantle.  
(CO1) [Comprehension]
7. Geology is the science which deals with the study of earth, its origin, composition, structure and history and has many branches. Enlist and explain any four major branches of geology.  
(CO1) [Comprehension]

8. Joining of the tributaries with the master stream produces a pattern termed as drainage pattern. Explicate the most common drainage patterns.

(CO1) [Comprehension]

9. Based on silica saturation igneous rocks are classified into three types. Enlist and explain the types of it with one example of it

(CO2) [Comprehension]

### **PART C**

#### **ANSWER THE FOLLOWING QUESTION**

**(1 X 20 = 20M)**

10. An earthquake is the shaking of the surface of the Earth resulting from a sudden release of energy in the Earth's lithosphere that creates seismic waves. Explain the occurrence, causes and effects of earthquake.

(CO1) [Application]