



# P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

**Fifth Semester, B.E. - Civil Engineering**

**Make-up Examination; March/April - 2022**

**Applied Geology**

Time: 3 hrs

Max. Marks: 100

### Course Outcome

The Students will be able to:

CO1: Students will able to apply the knowledge of geology and its role in Civil Engineering

CO2: Students will effectively utilize earth's materials such as mineral, rocks and water in Civil engineering practices

CO3: Analyze the natural disasters and their mitigation

CO4: Assess various structural features and geological tools in ground water exploration

CO5: Natural resource estimation and solving civil engineering problems

Note: i) Part -A is compulsory. One question from each unit for maximum of TWO marks

ii) Part-B: Answer any **two** sub questions (from a, b, c) from each unit for a Maximum of 18 marks.

Q. No.	Questions	Marks	BLs	COs	POs
<b>I : PART - A</b>		<b>10</b>			
I a.	Define the term Focus and Epicenter.	2	L1	CO1	PO1
b.	Define minerals with examples.	2	L1	CO2	PO1
c.	How sedimentary rocks are formed?	2	L1	CO3	PO2
d.	Define Folds.	2	L1	CO4	PO2
e.	What is tunnel?	2	L1	CO5	PO2
<b>II : PART - B</b>		<b>90</b>			
<b>UNIT - I</b>		<b>18</b>			
1 a.	Write briefly various branches and importance of Geology in Civil Engineering.	9	L1	CO1	PO2
b.	Define Earthquake. With a neat sketch, explain seismograph and zones of earth-quake in India.	9	L2	CO3	PO1
c.	Write a neat sketch of earth layers and add a note on Discontinuity of earth.	9	L1	CO3	PO2
<b>UNIT - II</b>		<b>18</b>			
2 a.	Explain physical properties and mineral hardness, Streak and Luster.	9	L2	CO2	PO1
b.	Write description of Quartz groups of minerals (any two) and write uses.	9	L3	CO2	PO1
c.	Write brief note on colour, fracture and structure of minerals.	9	L2	CO2	PO1
<b>UNIT - III</b>		<b>18</b>			
3 a.	What is Metamorphism? Explain various types of Metamorphism process.	9	L2	CO3	PO2

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|---|---|----|-----|-----|
| b. How Igneous rocks are formed? Write classification of Igneous rocks on the basis of formation. | 9 | L2 | CO3 | PO2 |
| c. Write description of Rocks, Basalt, Sand stone and Gneiss.                                     | 9 | L3 | CO2 | PO1 |

**UNIT - IV****18**

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|---|---|----|-----|-----|
| 4 a. What is Folds? With neat sketch, write parts and different types of folds. | 9 | L2 | CO3 | PO2 |
| b. Write short note on;   |   |    |     |     |
| i) Geological map   | 9 | L2 | CO3 | PO2 |
| ii) Parts of Faults   |   |    |     |     |
| c. Distinguish between Joints and faults.                                       | 9 | L2 | CO3 | PO2 |

**UNIT - V****18**

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|--|---|----|-----|-----|
| 5 a. With a neat sketch, explain investigation of ground water by electrical resistivity method. | 9 | L3 | CO4 | PO2 |
| b. What is Dam? Discuss briefly Geological consideration in selection of site for dams.          | 9 | L1 | CO4 | PO2 |
| c. Write briefly development and applications of Remote sensing in Civil Engineering practices.  | 9 | L2 | CO4 | PO2 |

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