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

(An Autonomous Institution affiliated to VTU, Belgaum)

Third Semester, B.E. - Civil Engineering

Semester End Examination; Dec - 2016/Jan - 2017

Applied Engineering Geology

Time: 3 hrs *Max. Marks: 100*

***Note**: Answer **FIVE** full questions, selecting **ONE** full question from each unit.*

UNIT - I

1	a.	Explain the role of geology in the field of Civil Engineering.	6
	b.	With a neat sketch, explain the internal structure of the earth on different unconformities.	8
	c.	What is texture? Describe the textures of igneous rocks.	6
2	a.	Briefly describe the various branches of geology.	6
	b.	Explain the primary structures of sedimentary rocks with neat sketch.	7
	c.	What is metamorphism? Describe the types of metamorphism with examples.	7

UNIT - II

3	a.	Write a brief note on epigene and hypogene geological agents with examples.	4
	b.	What are landslides? Write a note on causes and preventive measures of landslides.	10
	c.	Briefly explain earthquake waves.	6
4	a.	What is an earthquake? Briefly explain effects and precautionary measures of earthquake.	12
	b.	What is an epicenter? Write a note on seismograph with a diagram.	8

UNIT - III

5	a.	What are faults? Add note on Horst and Graben. How do you identify faults in the field?	12
	b.	What are unconformities? Explain types of unconformities.	8
6	a.	Write short note on Dip and Strike with a sketch.	6
	b.	What are folds? Add a note on anticlinal fold and synclinal fold with neat sketch.	6
	c.	What is joint? With neat sketch explain any three kinds of joints.	8

UNIT - IV

7	a.	Describe how geological investigation is carried out for selection of sites for dams foundation?	10
	b.	With a neat sketch, add a note on tunneling through folded strata.	10
8	a.	Discuss briefly the geological consideration in selecting site for reservoirs.	10
	b.	What is reservoir silting? Add a note on its preventive measures.	10

Contd.....2

UNIT - V

9 a.	What is an aquifer? Add a note on confined and unconfined aquifer with a neat sketch.	10
b.	With a neat sketch, give a brief note on hydrological cycle.	5
c.	What is remote sensing? Describe the application of remote sensing in the field of civil engineering.	5
10a.	What is groundwater? Describe how groundwater is prospected by electrical resistivity method?	10
b.	Explain GPS and its uses.	5
c.	What is GIS? Write its uses in Civil Engineering.	5

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