



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

(An Autonomous Institution affiliated to VTU, Belagavi)

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

**Semester End Examination; Dec - 2017/Jan - 2018**

**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 how engineering Geology helpful for Civil Engineering in construction? 10
- b. Write short notes on :
- i) Textures of Igneous Rocks 10
- ii) Important characters of Igneous and Sedimentary rocks.
2. Write short notes on :
- i) Hardness ii) Physical Weathering 20
- iii) Habit iv) Metamorphism.

## UNIT - II

- 3 a. Define Landslide. Explain preventive measures to control Landslide. 10
- b. Engineering considerations against Earthquake and Earthquake Resistant structures. 10
4. Define Earthquake. Explain origin and distribution of Earthquake in India and add a note on effects of Earthquakes. 20

## UNIT - III

5. Define fault. Explain the parts of fault and mechanism of formation. Add a note on importance and recognition of fault in the field. 20
6. Write short notes on :
- i) Horst and Graben type of fault ii) Unconformities 20
- iii) Parts of fold iv) Compass Clinometer.

## UNIT - IV

7. Explain briefly :
- i) Parts of Bridges with figure
- ii) Types of Dams with figure 20
- iii) Remedial measures to control silting up of Reservoir
- iv) Geological consideration in Bridge site.
8. Define Tunnel. Explain different types with neat sketches. Describe Geological selection site in Tunneling through different rocks with figure. 20

**UNIT - V**

9. Write short notes on :
- i) Hydrological cycle
  - ii) Aquifer and types with figure 20
  - iii) Water bearing properties of soil and different rocks
  - iv) Electrical Resistivity method of interpolation of resistivity curves.
10. Explain briefly :
- i) Principles of Remote sensing and its application in civil engineering. 20
  - ii) Global position system principles and its applications in civil engineering.

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