

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV • EXAMINATION – WINTER • 2014

Subject Code: 140604**Date: 05-01-2015****Subject Name: Engineering Geology****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define geology. Give the significance of study of geological science in civil engineering practices. **07**
 (b) Define mineral and rock. Describe three important physical properties of minerals. **07**
- Q.2** (a) Enlist the different geological agents? Discuss about the weathering patterns observed in rocks. **07**
 (b) Explain how landslides can be controlled. **07**
- OR**
- (b) Drawing a diagram, describe the various parts of a typical fold. **07**
- Q.3** (a) State the different applications of remote sensing and GIS in civil engineering. **07**
 (b) Describe the rock cycle. **07**
- OR**
- Q.3** (a) What are sedimentary rocks? How are these rocks formed? **07**
 (b) What is metamorphism? Describe types of metamorphism with suitable illustrations. **07**
- Q.4** (a) Describe various sources of ground water. **07**
 (b) What is a dam? List their types. Critically explain the geological problems encountered during the construction of dams. **07**
- OR**
- Q.4** (a) Discuss the role of porosity and permeability in occurrence of ground water. **07**
 (b) Narrate in detail the usefulness of geological maps and sections. **07**
- Q.5** (a) Describe the important geological properties of building stones. **07**
 (b) Explain the dip and strike of a bed and anticline and syncline with the help of sketches. **07**
- OR**
- Q.5** (a) State the objects of geological investigations. **07**
 (b) Discuss on the need and importance of artificial recharging of ground water. **07**
