

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC - SEMESTER-I • EXAMINATION – WINTER • 2014

Subject Code: X10602**Date: 23-12-2014****Subject Name: Engineering Geology****Time: 10:30 am - 01:00 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) What is weathering of rocks? Describe the physical weathering of rocks giving example. **07**
(b) Describe the rock cycle with a neat sketch. **07**
- Q.2** (a) Discuss the scope of Engineering Geology in Civil Engineering practices. **07**
(b) Describe three important physical properties of minerals with suitable illustrations. **07**
- Q.3** (a) Define porosity and permeability of rocks. Describe the zones of ground water movement. **07**
(b) How are sedimentary rocks formed? **07**
- Q.4** (a) Describe the terminology of a typical fault with the help of a sketch. **07**
(b) Discuss the mechanism of folding in rocks. **07**
- Q.5** (a) State the engineering properties of good building stones. **07**
(b) Classify the following rocks as per their origin: **07**
(i) Granite (ii) Sandstone (iii) Marble (iv) Schist
(v) Shale (vi) Gabbro (vii) Basalt
- Q.6** (a) Discuss the various applications of remote sensing and GIS techniques in Civil Engineering. **07**
(b) Explain outcrop, inlier, outlier, dip and strike of a bed with the help of neat diagrams. **07**
- Q.7** (a) What are landslides? State the causes of their occurrence. **07**
(b) Discuss the pros and cons of a tunnel alignment passing through folded rock formations. **07**
