

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC SEM-I Examination-Dec-2011

Subject code: X10602

Date: 23/12/2011

Subject Name: Engineering Geology

Time: 10.30 am -1.00 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) Write brief notes on the following topics: **07**
i) Scope of engineering geology in Civil Engineering
ii) Applications of remote sensing techniques in Civil Engineering
(b) Describe the Fracture and Lustre properties of minerals with suitable examples. **07**
- Q.2** (a) Describe chemical weathering of rocks. **07**
(b) Narrate the merits and demerits of dam sites located on folded sequence of rock formations. **07**
- OR**
- (b) Describe the rock cycle. **07**
- Q.3** Write brief notes on the following topics:
(a) Terminology of a typical fault **04**
(b) Dykes and Sills **05**
(c) Mechanism of folding **05**
- OR**
- Q.3** Write brief notes on the following topics:
(a) Inliers and outliers **04**
(b) Factors and kinds of metamorphism **05**
(c) Wind erosion through deflation **05**
- Q.4** (a) What are sedimentary rocks? Narrate how are these formed. **07**
(b) What are landslides? How are these caused? **07**
- OR**
- Q.4** (a) Describe briefly the important structures observed in Igneous rocks. **07**
(b) Discuss various difficulties encountered during tunnelling. **07**
- Q.5** (a) Discuss the implications of faults on the foundation of various civil engineering structures. **07**
(b) Write short notes on the following topics: **07**
i) Zonal distribution of sub-surface water
ii) Porosity and Permeability of rocks
- OR**
- Q.5** (a) State engineering properties of a good building stone. **07**
(b) Discuss the role of surface geological investigation in site selection for various civil engineering projects. **07**
