

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV (OLD) - EXAMINATION – SUMMER 2017****Subject Code: 140604****Date: 14/06/2017****Subject Name: Engineering Geology****Time: 10:30 AM to 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 geology? Describe in brief main branches of geology. **07**  
(b) Describe prediction of earthquake & describe earthquake waves. **07**
- Q.2** (a) Give the definition of Weathering. Describe the chemical weathering in detail. **07**  
(b) Describe the term plate-tectonics & describe the plate boundaries. **07**
- OR**
- (b) Write short notes on (i) sand dunes (ii) loess **07**
- Q.3** (a) What is mineralogy? Describe the physical properties of mineral. In detail describe only hardness & streak. **07**  
(b) What is the origin of sedimentary rocks? Give classification of sedimentary rocks. **07**
- OR**
- Q.3** (a) What is crystal? Describe elements of crystallography. **07**  
(b) What is petrology? Describe the structures of igneous rocks. **07**
- Q.4** (a) Define the terms: aquifer, aquiclude, aquitard, porosity, permeability, specific yield, ground water recharge. **07**  
(b) What is tunnel? Describe tunneling in different type of rocks. **07**
- OR**
- Q.4** (a) Application of remote-sensing. **07**  
(b) What is a geological criterion for site selection of dam & reservoir? **07**
- Q.5** (a) Give the terminology of fold & fault in detail. **07**  
(b) Give the classification of fault based on apparent movement. **07**
- OR**
- Q.5** (a) Explain dip & strike, anticline & syncline with neat sketch. **07**  
(b) Give classification of fault based on apparent movement. **07**

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