

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV (OLD) EXAMINATION – WINTER 2018****Subject Code:140604****Date: 14/12/2018****Subject Name: Engineering Geology****Time: 02:30 PM TO 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) List the types of plate boundaries and describe morphological features and geological processes associated with convergent plate boundary. **07**  
(b) What is a geological fault? Explain different components of a typical geological fault with neat diagram. **07**
- Q.2** (a) Describe scope of engineering geology in dam construction. **07**  
(b) Define different physical properties of minerals and explain form and hardness in detail with suitable examples. **07**
- OR**
- (b) Explain pressure and heat as agents of rock metamorphism. **07**
- Q.3** (a) Classify igneous rocks based on depth of formation and silica saturation. **07**  
(b) Explain origin of sedimentary rocks and describe structures observed in sedimentary rocks. **07**
- OR**
- Q.3** (a) Explain internal and external causes of landslides. **07**  
(b) Explain role of temperature in physical weathering of rocks. **07**
- Q.4** (a) Explain in details usefulness of geological maps and sections at a civil construction site. **07**  
(b) What is a geological fold? describe different components of a typical geological fold. **07**
- OR**
- Q.4** (a) Give detailed classification of geological faults. **07**  
(b) Give detailed classification of geological folds. **07**
- Q.5** (a) Explain water bearing qualities of rock formations and describe confined and unconfined aquifers. **07**  
(b) Define remote sensing and GIS technique and narrate their importance in selection of dam site. **07**
- OR**
- Q.5** (a) Give detailed account of site investigation for tunnel construction. **07**  
(b) Describe engineering properties of good building stone. **07**

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