

B.Tech 3rd Semester Exam., 2017

ENGINEERING GEOLOGY

Time : 3 hours

Full Marks : 70

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Instructions :

- (i) All questions carry equal marks.
- (ii) There are **NINE** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question No. 1 is compulsory.

1. Write in short (limiting to five sentences) on the following :
 - (a) Diagnostic physical properties of calcite
 - (b) Characteristics of valleys formed by tectonic activity
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 - (c) Transform faults and earthquakes
 - (d) Ground penetrating radar and its application
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 - (e) Causes for depletion of groundwater level
 - (f) S-wave characteristics
 - (g) Megascopic properties of any clastic sedimentary rock

2. (a) Describe the landforms developed by stream during young and mature stage.
(b) Explain the texture observed in gabbro rock.
3. (a) Describe the components of fold and classification of fold.
(b) Explain the difference between the strike slip and the dip-slip fault.
4. (a) Describe the causes of landslides and its preventive measures. akubihar.com
(b) Write about the surface and sub-surface investigations for the selection of a dam site.
5. (a) Explain briefly the stratigraphy of the Himalayan region of any State.
(b) Write the concept of dip and strike and its application in tunnelling.
6. (a) Describe the classification of igneous rocks.
(b) Explain the principle and application of the seismic method. akubihar.com
7. (a) Write the concept of GIS and its application in different geological investigations.
(b) Describe the different layers of atmosphere and their characteristics.

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8. (a) Write down the different textures of metamorphic rocks.
- (b) Explain the crystal systems and their axis of symmetry.

9. Write short notes on the following :

- (a) Sills and dykes
- (b) Shear joints and thrust fault
- (c) Radioisotopes and their applications
- (d) Engineering properties of rock

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