

**24383**

**B. Tech 6th Semester (Civil)  
Examination – May, 2018**

**ENGINEERING GEOLOGY**

Paper : CE-312-F

Time : Three Hours ] [ Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

- Note :** (i) Question No. 1 is compulsory. Attempt *one* question from each Section.  
(ii) All questions carry equal marks.  
(iii) Assume missing data, if any, suitable.

1. Explain the following :

- (a) Weathering the surface of the earth
- (b) Artesian wells and springs
- (c) Rock forming minerals
- (d) Volcano and Earthquake
- (e) Retaining walls

- (f) <http://www.HaryanaPapers.com>  
Importance of soil profile
- (g) Specific yield
- (h) Petrology and structural geology
- (i) Cone of depression
- (j) Types of tunnels 20

**SECTION – A**

- 2. (a) Name and Explain sub divisions of Engineering Geology ? Also explain the objectives of Geology. 10
- (b) Describe in brief the crust, the mantle and core of the earth. 10
- 3. (a) Explain the external and internal geological forces causing changes of the surface of the earth. 10
- (b) Explain the geological work of ice, water and wind in brief. 10

**SECTION – B**

- 4. (a) Explain the mineral composition, Textures, structure and origin of sedimentary and metamorphic rocks. 10
- (b) What is the mineral and list the physical properties of the minerals with brief description ? 10

5. (a) Describe in detail about different types of folds and faults with sketches. 10

(b) Explain in detail the importance of different geological structures in Civil Engineering projects. 10

### SECTION - C

6. (a) What do you mean by geological investigations? Explain the remote sensing techniques for geological and hydrological survey and investigation. 10

(b) What is aquifer? Describe in detail the different types of aquifers. 10

7. Describe the following in brief: 20

(a) Techniques of artificial ground water recharge.

(b) Difference between perched water table and ground water table

(c) Springs and artesian well.

(d) Geological maps and interpretation of data

8. (a) Explain the suitability and stability of foundation sites and abutments. 10

(b) What are the objectives of a dam? Describe geological considerations in the selection of a dam site. 10

9. (a) Describe the improvement of foundation rocks. What are the precaution and treatment against faults, joints and ground water? 10

(b) Write down the internal and external causes of landslides. State the measures to control slides. 10

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