

Printed Pages – 4

Roll No. :

320356(20)

B. E. (Third Semester) Examination, Nov.-Dec. 2021

(New Scheme)

(Civil Engg. Branch)

ENGINEERING GEOLOGY

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : All questions from part (a) carries 2 marks each. Part (b), (c) & (d) carries 7 marks each. Solve each question for 16 marks. Draw neat sketch wherever required.

Unit-I

1. (a) Define Engineering Geology. 2
- (b) Describe the megascopic (physical) properties for identification of the minerals. 7

320356(20)

PTO

[2]

- (c) Describe various engineering properties of rocks. 7
- (d) Write short notes on : 7
- (i) Mohr scale of hardness
 - (ii) Fundamental concept of geology
 - (iii) Cleave and fracture

Unit-II

2. (a) Define magma and lava. 2
- (b) Define sedimentary rocks and explain the structure of sedimentation. 7
- (c) Describe various types of faults in the rocks. 7
- (d) Write short notes on the following : 7
- (i) Agents of weathering
 - (ii) Types of joint rock

Unit-III

3. (a) Define Seismology. 2
- (b) Explain the classification of different types of seismic waves. 7

320356(20)

[3]

- (c) Write detailed note on earthquake resisting structures in higher seismic zone. 7
- (d) Write short notes on the following : 7
- (i) Richter scale
 - (ii) Intensity of earthquake
 - (iii) Focus and Epicentre

Unit-IV

4. (a) Define the term strata. 2
- (b) Discuss the role of geological factor in landslide. 7
- (c) Explain land subsidence. Describe its causes and preventive measures. 7
- (d) Describe the role of groundwater in landslides. 7

Unit-V

5. (a) Define Geological map. 2
- (b) Describe the preventive measures between unsafe geological structure and stability of tunnels. 7

320356(20)

PTO

[4]

- (c) Concepts and usage of geological map for civil engineering projects. 7
- (d) Describe various geological considerations for selection of dam and reservoir. 7