

FACULTY OF ENGINEERING**B.E. II/IV (Civil) I – Semester (Backlog) Examination, May / June 2019****Subject: Engineering Geology****Time: 3 Hours****Max. Marks: 75****Note: Answer all questions from Part A and Part B and any FIVE questions from Part – B.****PART – A (10 x 2.5 = 20 Marks)**

- 1) Define the terms cleavage and hardness of mineral.
- 2) Brief the development of amygdaloidal structure in rock basalt.
- 3) Define in a rock and draw a neat sketch of it with label the parts.
- 4) Write the types of the bore hole drilling methods.
- 5) Calculate coefficient of hardness of rock initial weight is 20 kg and loss of weight after the test is 18 grams.
- 6) What are the advantages of arch dam?
- 7) How do you prevent and solve the problem of sedimentation and siltation in the reservoirs?
- 8) Give any four techniques for tunnel support.
- 9) What are the reasons for origin of tsunami?
- 10) Give any four applications of GIS in engineering geology.

PART – B (5 x 10 = 50 Marks)

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| 11. a) Explain the different methods of study of minerals. | 5M |
| b) Write geological classification and uses of following rocks. | 5M |
| (i) Dolerite and Basalt (ii) Sand stone and lime stone. | |
| 12. a) How do you recognize the faults in the field? | 5M |
| b) Describe the engineering classification of rock weathering. | 5M |
| 13. a) Write stress relationship of granite, gabbros, dolerites and basalt. | 5M |
| b) Explain the electrical resistivity survey in finding depth to bedrock in the site. | 5M |
| 14. a) What are the geological consideration in selection of dam site? | 5M |
| b) Write the leakage aspects of reservoir. | 5M |
| 15 a) Describe the engineering geological investigation for selection of tunnel. | 5M |
| b) Describe the causes of landslides. | 5M |
| 16 a) Write short note on the following: | |
| i) GIS application in the evaluation of geological terrain. | 5M |
| ii) Give a brief note on Tsunami occurred near Andaman and Nicobar island. | |
| b) Write the preventive measures for landslides. | 5M |
| 17 a) Describe the types of Indian soils and their engineering properties. | 5M |
| b) Test of weathering. | 5M |