



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code:2P4AA

B.Tech IV Semester Regular/Supplementary Examinations, July 2021

ENGINEERING GEOLOGY (CIVIL ENGINEERING)

Maximum Marks: 70

Date:13.07.2021 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 What is meant by weathering?
- 2 Define the terms Petrology and Structural geology?
- 3 Define the term Mineralogy?
- 4 What are the types of Minerals?
- 5 Draw columnar structure of igneous rocks?
- 6 Define the terms Porosity and Permeability?
- 7 Define the term Ground water and cone of depression?
- 8 What is meant by STRIKE, DIP?
- 9 Describe the electrical resistivity method of site investigation?
- 10 What is the importance of lining in tunnels?

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 a) Discuss the importance of Geology in the field of Civil Engineering? 5M
b) What are the types of geological agents? Describe briefly the natural agencies? 5M
OR
- 12 a) What are the types of Granite? 5M
b) Discuss the geological work of river? Give the depositional landforms made by rivers? 5M
- 13 a) Describe the physical properties of minerals (i) Asbestos and (ii) Hematite. 5M
b) How do you distinguish mineral from a rock? 5M
OR
- 14 a) Give a detailed account of the chemical composition, physical properties, origin, and uses of Feldspar group minerals? 5M
b) Write the physical properties of QUARTZ group of minerals? 5M
- 15 a) What is the major difference of dykes and sills? Explain? 5M
b) Explain the engineering properties and description of Shale, Marble and Slate. 5M

OR

- 16 a) What is texture of a rock? Discuss the various types of textures in sedimentary rocks. 5M
b) Define the following terms: i) Hardness, ii) Luster, iii) Fracture, iv) Cleavage 5M

- 17 a) What is landslide? Give their classification. 5M
b) What are the major causes of landslide? Explain. 5M

OR

- 18 a) Classify and describe different types of joints in rock with neat sketches? 5M
b) What are the parts of FAULTS and give their types with sketches? 5M

- 19 a) Explain the Types of Dams with neat sketches? 5M
b) Explain the following with neat sketches a) Ground water table b) Types of Aquifer 5M

OR

- 20 a) What is tunnel? Explain its types, what are their advantages? 5M
b) Discuss geological considerations for a successful reservoir site? 5M