

Register No:

Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FOURTH SEMESTER B.TECH. DEGREE EXAMINATION(R,S), MAY 2024**Civil Engineering****(2020 SCHEME)**

Course Code : **20CET202**
Course Name : **Engineering Geology**
Max. Marks : **100**

Duration: 3 Hours**PART A***(Answer all questions. Each question carries 3 marks)*

1. Define soil erosion and explain soil conservation measures.
2. Describe the different coastal features created by marine erosion.
3. Define convergent, divergent and transform plate boundaries with neat sketches.
4. What is the significance of seismic zoning? List the seismic zones in India.
5. Differentiate well and tube well.
6. Discuss the electrical resistivity method employed for ground water prospecting.
7. Classify the igneous rocks on the basis of their mode of origin.
8. Enumerate the chemical composition and physical properties of Augite and Calcite.
9. Discuss the geological features of a site suitable for the construction of dams with regard to folds and faults.
10. Differentiate between Clinometer compass and Brunton compass.

PART B*(Answer one full question from each module, each question carries 14 marks)***MODULE I**

11. "Kerala recorded highest number of landslides in India in past 7 years." - Hindustan Times. 14
Explain the causes of landslides and measures to control it.

OR

12. a) Describe the different types of weathering and their causes. 9
b) Do you think weathering is a significant factor in the field of Civil Engineering? Substantiate your answer. 5

MODULE II

13. Discuss the propagation of seismic waves through the interior of the earth. 14

OR

14. Turkey was hit by two powerful earthquakes of magnitudes 7.5 and 7.8, on 6th February 2023, caused due to the movement of Anatolian and Arabian plates past each other. 7
a) Which category does the Turkey earthquakes belong to? Discuss the classification of earthquakes. 7

b) Describe the methods for rating an earthquake.

MODULE III

15. a) What is an aquifer? Describe the different types of aquifers with neat sketches. 7
b) Comment on the vertical distribution of groundwater. 7

OR

16. a) '*Groundwater can be a natural hazard*' Do you agree? Substantiate your answer. 8
b) Suggest any two methods to control the problems caused by groundwater to Civil Engineering structures. 6

MODULE IV

17. Give the important characteristic features of the following 14
i) granite ii) basalt iii) sandstone iv) limestone.

OR

18. Distinguish between metamorphic and sedimentary rocks with respect to their structure with suitable diagrams. 14

MODULE V

19. Explain the attitude of rocks with a neat sketch. 14

OR

20. Classify and describe the different types of faults in rocks with neat figures. 14
