Ex/CON/BS/B/Geo/TS/216/2024(S)

B.E. CONST. ENGG. 2ND YEAR 1ST SEMESTER SUPPLEMENTARY EXAM. 2024

Subject: Engineering Geology

Full Marks: 100 **Time: 3 hours**

Attempt any 5 questions. **5 x 20**

1. With the help of seismological study how the interior structure of the Earth can be revealed? What are the different layers present with in the earth?

   12 + 8

2. With the help of suitable diagrams briefly describe the different plate boundaries in the earth? Write major supporting evidences for the continental drift theory?

   12 + 8

3. What is fault? What are the criteria for the recognizing faulting in the field? Describe Net slip, Strike-slip and Dip-slip of a fault with suitable sketches. Discuss the types of faults based on faulting pattern.

   4 + 6 + 4 + 6

4. What is fold? With the help of suitable diagram define fold axis, fold axial plane, transverse profile, hinge line, inflection line, extrados and intrados surface. What are anticlinal and synclinal folds? Define foliation with suitable sketch?

   4 + 6 + 6 + 4

5. Describe briefly the principal types of dams. What types of geological investigations are carried out in tunneling projects?

   6 + 14

6. Briefly discuss about different 'Clastic Sedimentary Rocks". What is Joint? Discuss about different types of joints with suitable figures. What is a Shear Zone? Discuss different features associated with shear zones with suitable diagrams.

   8 + 4 + 1 + 7

7. Define mineral mentioning all of its characteristics. Give examples of two common silicate minerals and two ore minerals. State the physical properties by which a mineral can be identified in hand specimen. What is Moho's scale of hardness? How the hardness of a mineral is measured in hand specimen in the Laboratory. What is cleavage of a mineral? Give examples of minerals having (a) no cleavage, (b) one set of cleavage, (c) two sets of cleavage. What is the different between body colour and streak of mineral? How a rock is defined? What are the characteristic features by which, igneous, sedimentary and metamorphic rocks can be identified in hand specimen?

   2 + 1 + 2 + 2 + 1 + 1 + 2 + 2 + 1 + 2