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Question Paper Code: 43103

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Third Semester

Civil Engineering

14UCE303 - ENGINEERING GEOLOGY

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Which one belongs to the layer of earth?
(a) Regolith (b) Troposphere (c) Crust (d) Epicentre
- New sea floor is created at
(a) deep sea trench (b) mid-oceanic ridge
(c) subduction zone (d) transform fault
- The tendency of the mineral to break along certain direction is known as
(a) Lustre (b) Cleavage (c) Specific gravity (d) Hardness
- What is the hardness of Quartz?
(a) 1 (b) 7 (c) 6 (d) 5
- Factor affecting metamorphism are
(a) Temperature and Pressure (b) Moisture and Air
(c) Weathering (d) None of these
- Which one of them is used for architecture work?
(a) Limestone (b) Shale (c) Marble (d) None of these

7. What is outcrop?
- (a) Rocks formed inside the earth (b) Rocks formed inside ocean
(c) Rocks formed due to magma (d) Rock exposure on earth surface
8. Geophone are used in_____ survey.
- (a) Seismic (b) Geochemical (c) Gravity (d) Electrical
9. Arrangement of aerial photograph referred as
- (a) aerial mosaic (b) tilted photograph
(c) horizontal photograph (d) spatial signature
10. The refractive index of the ocean water is
- (a) Increases with salinity (b) Increases with temperature
(c) Decreases with temperature (d) Decreases with salinity

PART - B (5 x 2 = 10 Marks)

11. Define focus and epicenter in earthquake.
12. Distinguished between amphibole and pyroxene group.
13. List out the factor affecting texture in a rock.
14. What do you mean by true dip?
15. Distinguish between aerial photography and imageries.

PART - C (5 x 16 = 80 Marks)

16. (a) Write about the geological work of wind and their engineering consideration. (16)

Or

- (b) (i) Define weathering and factor affecting weathering. (8)
(ii) Describe in detail about plate tectonics (8)

17. (a) What are the rock forming minerals? Give a general account of their Chemical and Physical properties. (16)

Or

- (b) Compare and contrast the minerals of Pyroxene group to that of Amphibole group. (16)

18. (a) Distinguish igneous, sedimentary and metamorphic rock. (16)

Or

(b) Explain briefly about factors and effects metamorphism. (16)

19. (a) Explain the parts of a fault. Bring out the important types of faults with neat diagrams. (16)

Or

(b) Describe the Wenner and Schlumberger configuration in electrical resistivity surveying for civil engineering investigation. (16)

20. (a) Explain the geological requirements which will have to be investigated for selecting a site for a tunnel. (16)

Or

(b) (i) Write the application of remote sensing in civil engineering. (8)

(ii) List out the causes and prevention for landslides. (8)

