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Question Paper Code: 43103

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

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)

- Mohorovicic discontinuity separates
 - Core and mantle
 - Crust and mantle
 - Inner core and outer core
 - Sima and nife
- Chemical weathering is most prominent in
 - Arid region
 - Semi-arid region
 - Humid tropical region
 - Mediterranean region
- Which mineral is used for generating atomic or nuclear power
 - Coal
 - Bauxite
 - Uranium
 - Copper
- What is the hardness of Quartz?
 - 1
 - 7
 - 6
 - 5
- Factor affecting metamorphism are
 - Temperature and Pressure
 - Moisture and Air
 - Weathering
 - None of these
- Which one of them is used for architecture work?
 - Limestone
 - Shale
 - Marble
 - None of these

7. The amount of ground displacement in a earthquake is called the
 (a) epicenter (b) dip (c) slip (d) focus
8. Anticlines
 (a) Form in rocks that are resistant to folding
 (b) Form in rocks as a result of brittle deformation
 (c) Are upwarped folds
 (d) Are downwarped folds
9. Fossils are most common in which rock types
 (a) Sedimentary rocks (b) Igneous rocks
 (c) Metamorphic rocks (d) Silicious rocks
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. Define Magma and Lava.
14. What are the criteria for the recognition of a fault?
15. List out the applications of remote sensing.

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) Describe the various physical properties of minerals and give examples from the minerals kingdom for each of the property. (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) Describe in brief about the various classification of fold with neat sketch. (16)

Or

(b) Explain in detail the role of electrical methods of sub-surface investigation in civil engineering practice. (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)

