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Question Paper Code: 41133

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

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)

1. Abrasion by the river is related to which of the following process
 - (a) transportation
 - (b) erosion
 - (c) deposition
 - (d) disintegration
2. Chemical weathering is most prominent in
 - (a) Arid region
 - (b) Semi-arid region
 - (c) Humid tropical region
 - (d) Mediterranean region
3. Which of the following mineral has the lowest hardness
 - (a) fluorite
 - (b) topaz
 - (c) gypsum
 - (d) quartz
4. The specific Gravity of Enstatite of pyroxene family varies from
 - (a) 2.5 – 3.4
 - (b) 3.1 – 3.3
 - (c) 3 – 4.4
 - (d) 2.2 – 3
5. Which of the following metamorphic rocks cannot form shale?
 - (a) schist
 - (b) slate
 - (c) marble
 - (d) phyllite
6. Which one of them is used for architecture work?
 - (a) Limestone
 - (b) Shale
 - (c) Marble
 - (d) None of these

7. Repetition of beds on a geological map may be due to
(a) folding (b) faulting (c) jointing (d) dip

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. 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 the term continental shelf.
12. Name the physical properties of minerals.
13. What are the agents of metamorphism?
14. What are the criteria for the recognition of a fault?
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) Explain the different types of weathering. (8)

17. (a) Explain the physical properties of feldspar group of minerals. (16)

Or

(b) Write the physical properties and uses of the following minerals

(i) Rock crystal (ii) Augite (iii) Biotite (iv) Calcite (16)

18. (a) Illustrate the properties of metamorphic rocks.

(i) Quartzite (ii) Slate (iii) Gneiss (iv) Schist (16)

Or

(b) How igneous and sedimentary rocks formed? Explain in detail (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 geological and related criteria in the construction of earth dam. (16)

Or

(b) Classify landslides and discuss about the causative factors of landslides. Also add a note on the measures for mitigation of landslides. (16)
