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Question Paper Code: 41313

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

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. The place where movement occurs in a crustal plate that triggers an earthquake is called
(a) focus (b) epicenter (c) dip (d) strike
3. Which of the following mineral has the lowest hardness
(a) fluorite (b) topaz (c) gypsum (d) quartz
4. Which of the following diagnostic physical properties of calcite
(a) colour (b) fracture (c) luster (d) hardness
5. Which of the following metamorphic rocks cannot form shale?
(a) schist (b) slate (c) marble (d) phyllite
6. In dynamic metamorphism dominant agent is
(a) temperature (b) chemically active fluid
(c) pressure (d) compression force

7. Repetition of beds on a geological map may be due to
(a) folding (b) faulting (c) jointing (d) dip
8. Symmetrical fold is categorized on the basis of
(a) axial plane and limb (b) axis of fold
(c) hinge of fold (d) limb of fold only
9. Arrangement of aerial photograph referred as
(a) aerial mosaic (b) tilted photograph
(c) horizontal photograph (d) spatial signature
10. Which of the following cannot be achieved by remote sensing?
(a) land use pattern (b) detection of forest fire
(c) detection of lineaments (d) prevention of earthquake

PART - B (5 x 2 = 10 Marks)

11. Define the term continental shelf.
12. What is meant by fluorescence? Give an example.
13. What are the agents of metamorphism?
14. What do you mean by true dip?
15. Distinguish between aerial photography and imageries.

PART - C (5 x 16 = 80 Marks)

16. (a) Give an account of the internal structure and composition of the earth. (16)

Or

- (b) How are wind cause erosion, transportation and deposition? Describe the land forms made by wind. (16)

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) Elaborate the characteristic features of igneous and sedimentary rocks. (16)

Or

(b) Write notes on origin, mineralogy and uses of the following rocks

(i) Granite

(ii) Limestone

(iii) Shale

(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) Write a detail account on the various geological structures and their role in selection of a site for the construction of a dam. (16)

Or

(b) Write notes on the following

(i) Preventive measures for landslides

(8)

(ii) Applications of remote sensing

(8)

