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**Question Paper Code: 43103**

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 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)

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. What is the hardness of Quartz?  
(a) 1      (b) 7      (c) 6      (d) 5
5. Factor affecting metamorphism are  
(a) Temperature and Pressure      (b) Moisture and Air  
(c) Weathering      (d) None of these
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. 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. 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. 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) (i) Define weathering and factor affecting weathering. (8)
- (ii) Describe in detail about plate tectonics (8)
17. (a) (i) Explain about any four physical properties of minerals. (8)
- (ii) Write a short note on atomic structure of silicate group. (8)

Or

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

18. (b) Writes notes on origin, mineralogy and uses of the following rocks (16)  
(i) Granite                      (ii) Limestone                      (iii) Shale

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

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

Or

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

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

