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Question Paper Code: 41133

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

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)

- Frost action takes place due to
 - Crystal growth
 - Freezing of water
 - Exfoliation
 - None of these
- A volcano which has not erupted for a long time is called as
 - Active volcano
 - Dormant volcano
 - Extinct volcano
 - Dead volcano
- Which mineral is used for generating atomic or nuclear power
 - Coal
 - Bauxite
 - Uranium
 - Copper
- Which out of the following minerals is formed by the decomposition of surface rocks, and leaves a residual mass of weathered material
 - Gold
 - Bauxite
 - Zinc
 - Coal
- Igneous rocks with high concentration of Mg and Fe are likely to have formed from magmas originally derived from
 - SIAL
 - SIMA
 - MANTLE
 - Outer Core
- Iron-rich igneous rocks are denser than rocks which are rich in
 - silica
 - Sulphur
 - cobalt
 - calcium

7. The amount of ground displacement in an earthquake is called the
(a) epicenter (b) dip (c) slip (d) focus
8. Dip of a bed is a vector quantity because it has got
(a) Direction (b) Magnitude
(c) Direction and magnitude (d) None of these
9. The part where the dam comes in contact with ground on upstream side is
(a) Heel (b) Toe (c) Base (d) None of these
10. The full form of GIS is
(a) Graphical information system
(b) Geographical information system
(c) Geographical information source
(d) Graphical information source

PART - B (5 x 2 = 10 Marks)

11. What is an oxbow lake?
12. List the properties of quartz.
13. Define Magma and Lava.
14. Mention the uses of geological map.
15. What is mass movement?

PART - C (5 x 16 = 80 Marks)

16. (a) Describe the branches of Geology and their importance in civil engineering. (16)
- Or
- (b) Describe the origin and occurrence of groundwater. (16)
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) Write short notes on: (i) Granite (ii) Diorite (iii) Syerite (iv) Basalt (v) Gabbro. (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) 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) Write short essay on the utilization aspect of geology in engineering. (16)
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