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Code No. : 13107

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (Civil Engg.) III-Semester Main Examinations, December-2017

Geology

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. Define the terms 'mineral' and 'crystal'.
2. Brief the process of development of amygdaloidal structure in basalt rock.
3. Define the terms throw and heave of faults.
4. Draw a neat sketch of soil profile and label the different layers.
5. Define the aquifuge and aquiclude along with one example of each.
6. What is porosity and permeability.
7. List the various types of dams.
8. Write a note on silting of reservoirs.
9. What is logging in tunnels and its necessity.
10. Define the terms focus and epicenter of earthquake.

Part-B (5 × 10 = 50 Marks)

11. a) Describe the physical properties of following minerals: [6]
i) Quartz ii) Hornblende iii) Calcite
- b) Discuss the mechanical structures of sedimentary rocks. [4]
12. a) What is an unconformity in rocks? Add a note on the different types of unconformities. [6]
b) Describe the physical weathering processes in the rocks. [4]
13. a) Explain the different types of aquifers. [7]
b) Discuss the various types of springs. [3]
14. a) Discuss the role of structural features in the selection of a dam site. [7]
b) Describe the causes and control measures of leakage in reservoirs. [3]
15. a) Discuss the role of geology in tunneling. [5]
b) Explain causes and effects of earthquakes. [5]
16. a) Explain the different textures exhibited by Igneous rocks. [6]
b) Describe the geological classification of soils. [4]
17. Answer any *two* of the following:
a) Hydrological cycle [5]
b) Write a note on foundation geology of any major dam site of India. [5]
c) Causes and types of land slides. [5]