Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 20254

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2018.

Third Semester

Civil Engineering

CE 6301 — ENGINEERING GEOLOGY

(Regulations 2013)

(Common to : PTCE 6301 – Engineering Geology for B.E. (Part-Time), Second Semester – Civil Engineering – Regulations 2014)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write short notes on the interior of the earth.
2. Give a short account on the landforms associated with wind.
3. Briefly write the physical properties of clay minerals.
4. Write notes on the physical properties of Quartz group of minerals.
5. Give the engineering properties of Slates.
6. How do you distinguish between igneous and sedimentary rocks?
7. Distinguish between geological map and topographic map.
8. Using a diagram, explain dip and strike of beds.
9. What is over break in tunneling?
10. List the various coastal protection structures.

PART B — (5 × 13 = 65 marks)

11. (a) Discuss in detail the causes of Earthquakes and write a note on seismic zones of India.

Or

(b) Write an essay on the landforms and processes associated with rivers.

12. (a) Give a detailed account on the physical properties of Feldspar group of minerals.

Or

(b) Enumerate the physical properties of Amphibole and mica group of minerals and their suitability in civil engineering structures.

13. (a) Write an essay on the engineering properties, distribution and uses of Granite, Dolerite and Basalt.

Or

(b) Describe the engineering properties, distribution and uses of Sandstones and Limestones.

14. (a) Explain the various types of Folds and Faults and their influence on civil engineering structures.

Or

(b) Describe in detail the seismic methods for subsurface investigations.

15. (a) Write an essay on the geological conditions required for the design and construction of Dams and Reservoirs.

Or

(b) Discuss in detail about the causes and mitigation of Landslides.

PART C — (1 × 15 = 15 marks)

16. (a) Write an essay and critically discuss the concept of plate tectonics and its role in generation of earthquakes.

Or

(b) Discuss in detail and give elaborate explanation on the geological conditions required for the design and construction of Tunnels and Road cuttings.

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