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Question Paper Code : 30067

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Second Semester

Electrical and Electronics Engineering

BE 3255 — BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to : Electronics and Instrumentation Engineering/Environmental Engineering/Instrumentation and Control Engineering)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. What is meant by town planning?
2. What are the non-conventional sources of energy?
3. What are the advantages of reinforced Concrete?
4. What are the various mechanical properties of building material?
5. What is suspension bridge?
6. What is plastering?
7. Compare 4-stroke and a 2-stroke engine.
8. How are boilers classified?
9. Differentiate vapour-compression and vapour-absorption system.
10. Define wet-bulb temperature.

PART B — ($5 \times 13 = 65$ marks)

11. (a) Discuss the advantages and disadvantages of road and railway transport system.

Or

- (b) Discuss the various interdisciplinary concepts of engineering with few examples to enhance values to their systems.

12. (a) Discuss the types of thermo plastics and thermo-setting plastics.

Or

- (b) What are the objectives of surveying? How surveying is classified?

13. (a) What is green building? What are the salient features of a green building? Mention few benefits green building.

Or

- (b) Discuss types of building stones and their Uses.

14. (a) Discuss with a neat sketch the different parts of steam turbine.

Or

- (b) Explain with a neat sketch working of steam power plant.

15. (a) Discuss the working principle of vapour compression refrigeration system.

Or

- (b) Explain the working of split air-conditioner.

PART C — (1 × 15 = 15 marks)

16. (a) Discuss any one high pressure boiler and what are the advantages of high pressure boiler.

Or

- (b) Discuss the centrifugal pump components and their functions.