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

Question Paper Code : 40186

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Second Semester

Electrical and Electronics Engineering

BE 8252 – BASIC CIVIL AND MECHANICAL ENGINEERING

(Common to Electronics and Instrumentation Engineering/Environmental Engineering/Instrumentation and Control Engineering/Material Science and Engineering/Safety and Fire Engineering/
Bio Technology/Biotechnology and Biochemical Engineering/Food Technology/ Pharmaceutical Technology)

(Regulations 2017)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the different types of steel?

2. Name few types of cements used in construction.

3. State the purpose of dams.

4. List the different types of bonds in brick masonry.

5. How Pumps are classified?

6. Mention any three parts of steam power plant.

7. Give the field applications of Diesel power plant.

8. How IC engines are classified?

9. What are factors which affect the comfort air-conditioning?

10. Define tonne of refrigeration.

PART B — (5 × 13 = 65 marks)

11. (a) Explain the principle of levelling.

Or

(b) Classify bricks and state its characteristics and uses of each one of them.

12. (a) What do you understand by a foundations? Draw sketches to show various types of shallow foundations.

Or

(b) What are the factors influencing the selection of dams. Explain with neat diagram any one type of dam.

13. (a) Explain with a neat sketch of Thermal (steam) power plant.

Or

(b) Explain with a neat sketch of Nuclear power plant.

14. (a) Differentiate between two stroke and four stroke engine.

Or

(b) Discuss the working of two stroke cycle petrol engine with help of neat sketch.

15. (a) Explain with neat sketch of Domestic Refrigerator.

Or

(b) Describe with help of diagram, Vapour compression refrigeration system.

PART C — (1 × 15 = 15 marks)

16. (a) Explain the working principle of single acting reciprocating pump with help of a line sketch, naming all main parts. (15)

Or

(b) Explain the working principle of split type air conditioner in detail. (15)

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