

23AES0101

B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2024

First Semester

Computer Science Engineering

BASIC CIVIL AND MECHANICAL ENGINEERING

(RU 23 Regulations)

Time : 3 Hours

Max. Marks : 70

PART — A

(Compulsory question)

(5 × 1 = 5 Marks)

I. Answer the following

1. (a) What are the major constituents of Cement?
- (b) List the qualities of good brick.
- (c) Discuss the principles of surveying.
- (d) Define the term bearing.
- (e) Define Hydrology.

II. Answer ONE full question from each Unit.

(3 × 10 = 30 Marks)

ALL questions carry equal marks.

UNIT I

2. Explain the role of Civil Engineers in the society. (10)

Or

3. What are the different types of cement? (10)

UNIT II

4. What is Contour? What are the characteristics of Contours? (10)

Or

5. What are the levelling instruments used in Surveying? (10)

UNIT III

6. Differentiate between Flexible pavements and Rigid Pavements. (10)

Or

7. What are factors to be considered in the selection of site for dam construction? (10)

Turn Over

PART — B

(Compulsory question)

(5 × 1 = 5 Marks)

I. Answer the following

8. (a) What is Energy?
- (b) What is casting?
- (c) What are composite materials?
- (d) Define the belt drives.
- (e) What is Robotics?

II. Answer ONE full question from each Unit.

(3 × 10 = 30 Marks)

ALL questions carry equal marks.

UNIT I

9. Explain the role of Mechanical Engineers in the society. (10)

Or

10. Explain the classification of Ferrous and Non-Ferrous materials. (10)

UNIT II

11. Explain the principles of casting and forming processes. (10)

Or

12. Derive the otto cycle efficiency. (10)

UNIT III

13. Explain the working principle of steam power plant. (10)

Or

14. Explain various types of the components of a robot. (10)