

CBCS SCHEME

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18AU732

Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 Earth Moving Equipments and Tractors

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Enlist the different types of earthmoving equipments and write two applications for each. (10 Marks)
- b. Explain with a neat sketch working principle and applications of rollers. (10 Marks)

OR

- 2 a. How do you classify excavator? Explain the working principle and application of excavator with a neat sketch. (10 Marks)
- b. Explain with a neat sketch working principle and application of bulldozers. (10 Marks)

Module-2

- 3 a. Enlist the different working system of engine with their functions. (05 Marks)
- b. Distinguish tyred vehicles and track type of vehicles with their advantages. (05 Marks)
- c. Discuss briefly the Rubber spring suspension and air spring suspension. (10 Marks)

OR

- 4 a. Draw a neat sketch of under carriage system of earthmoving vehicles and list their components. (06 Marks)
- b. With a neat sketch explain the working of automatic injection timer. (06 Marks)
- c. Discuss briefly the function of turbocharger and aftercooler. (08 Marks)

Module-3

- 5 a. List the basic types of transmissions and explain the planetary transmission. (10 Marks)
- b. With a neat sketch explain the twin countershaft transmission. (10 Marks)

OR

- 6 a. Explain the construction and working compound transmission system. (10 Marks)
- b. Explain with a neat sketch of hydro-shift automatic transmission. (10 Marks)

Module-4

- 7 a. Explain the basic components of hydraulic system with a neat sketch. (10 Marks)
- b. Classify the types of hydraulic pump and explain the external gear pump with a neat sketch. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Discuss the functions with a neat sketch and explain the direction control valve and flow control valve. (10 Marks)
b. Explain the depth and draft control system with a simple line diagram. (10 Marks)

Module-5

- 9 a. Briefly discuss the criterion/factors for selecting the earthmoving equipment. (10 Marks)
b. Discuss the classification of soil and explain briefly. (10 Marks)

OR

- 10 a. List the different types of maintenance and explain briefly. (06 Marks)
b. Briefly explain the various safety methods adopted in earthmoving equipments. (07 Marks)
c. With a neat diagram, explain the organization setup in maintenance department. (07 Marks)

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