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18AU732

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024 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. Explain the following with simple line diagram :
i) Excavators ii) Motor Grader (10 Marks)
b. Discuss the various attachments of Tractors and mention their applications. (10 Marks)

OR

- 2 a. With neat sketch, explain the construction and working of Bulldozers and mention its types and applications. (10 Marks)
b. List of the different types of earth moving equipment and mention their respective applications. (10 Marks)

Module-2

- 3 a. List and explain different working systems of engine with their functions. (10 Marks)
b. With a neat diagram, explain the working of turbochargers. Mention its advantages. (10 Marks)

OR

- 4 a. With a help of a line diagram, explain after cooler system. Mention its advantages. (10 Marks)
b. Compare types and tracked vehicles. (10 Marks)

Module-3

- 5 a. Name the basic types of transmission and explain any one types with a neat sketch. (10 Marks)
b. Explain the construction and working of hydroshift automatic transmission with a diagram. (10 Marks)

OR

- 6 a. Mention the types and applications of 'PTO' shaft. (10 Marks)
b. Explain with a neat diagram of hydraulic retarders used in earth moving equipment. (10 Marks)

Module-4

- 7 a. List the types of pumps used in hydraulic system and explain any one type of them with a figure. (10 Marks)
b. Discuss the function of i) Flow control valves ii) Direction control valves (10 Marks)

OR

- 8 a. Explain the construction and working of vane type motor with neat diagram. (10 Marks)
b. Explain the construction and working of swash plate axial piston motor with diagram. (10 Marks)

Module-5

- 9 a. Discuss the various considerations while selecting an earth moving equipment for different activities. (10 Marks)
b. Explain the maintenance of earthmoving equipments. (10 Marks)

OR

- 10 a. Write the advantages of maintaining the earth moving equipment. (10 Marks)
b. Discuss the various safety measures adopted for earth moving equipment. (10 Marks)