

CBCS SCHEME

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17AU741

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022 Earthmoving Equipments and Tractors

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- a. Enlist the different types of Earth Moving Equipment. Briefly explain their application. (10 Marks)
- b. Explain the Working, Construction and Applications of a Shovel, with a neat sketch. (10 Marks)

OR

- a. Briefly discuss the working of motor grader, with simple line diagram. (10 Marks)
- b. Draw a neat sketch of Scraper and explain their application. (10 Marks)

Module-2

- a. Explain the importance of Turbocharger and After cooler in earth moving vehicle engine. (10 Marks)
- b. With the aid of neat sketch, briefly explain the under carriage components of Earthmoving vehicle. (10 Marks)

OR

- a. Explain the advantages and disadvantages of Wheeled and Crawler tractors. (10 Marks)
- b. Write brief notes on :
i) Rubber Spring Suspension ii) Air Spring Suspension. (10 Marks)

Module-3

- a. List the basic types of transmission used in Earth moving vehicles and explain any one type in detail. (10 Marks)
- b. What is PTO shaft? Explain the working and application in tractors. (10 Marks)

OR

- a. With neat sketch, explain the Construction and Working of a Planetary steering system. (10 Marks)
- b. Explain the Construction and Working of a disc brake mechanisms in tractors. (10 Marks)

Module-4

- a. Sketch and explain the Hydraulic system with basic components. (10 Marks)
- b. Write short note on :
i) Direct Acting pressure relief valve ii) Pressure Control valves. (10 Marks)

OR

- a. Explain the function of following components in hydraulic system :
i) Pumps ii) Control valves iii) Hydraulic motor iv) Hydraulic cylinder. (10 Marks)
- b. Explain the Depth and Draft Control System, with a simple line diagram. (10 Marks)

Module-5

- 9 a. Discuss the types of maintenance and state the purpose with advantages in Earth Moving Equipments. (10 Marks)
- b. Discuss the various Safety measures adopted in Earth Moving Equipments. (10 Marks)
- OR**
- 10 a. Discuss the various considerations while selecting Earth Moving Equipments for different activities. (10 Marks)
- b. Write short notes on :
- i) Operation Capacity ii) Productivity of Bulldozers. (10 Marks)
