

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

- 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

- 2 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

- 3 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

- 4 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

- 5 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

- 6 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

- 7 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

- 8 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)
