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Eighth Semester B.E. Degree Examination, Aug./Sept.2020
Earthmoving Equipments and Tractors

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1 a. List out the different types of earth moving equipments and explain their applications briefly. (10 Marks)
- b. Explain the following with neat sketches : i) Excavator ii) Roller. (10 Marks)
- 2 a. Discuss the special features of Tractors and its attachments. (10 Marks)
- b. Explain the importance of following in earth moving vehicles engine's performance :
i) Turbo chargers ii) After coolers. (10 Marks)
- 3 a. Compare Tyred vehicles Vs Tracked vehicles. (06 Marks)
- b. Draw and explain the under carriage components of a tracked vehicles. (10 Marks)
- c. Explain Air spring suspension. (04 Marks)
- 4 a. List the basic types of transmission systems adopted in earthmoving equipments and explain any one type with figure. (10 Marks)
- b. Explain the working of PTO shaft in tractors. State the advantages. (10 Marks)

PART - B

- 5 a. Discuss the functions of following components in the hydraulic systems of earth moving vehicles : i) Pumps ii) control valves (All types). (10 Marks)
- b. With a neat sketch, explain the Depth and Draft Control systems. (10 Marks)
- 6 a. List out the different types of Power Steering Systems and explain any one in detail. (10 Marks)
- b. Explain the steering in tracked vehicles. (05 Marks)
- c. Explain the disc brake mechanism. (05 Marks)
- 7 a. What is Preventive Maintenance? Discuss its importance in maintaining the earth moving vehicle systems. (10 Marks)
- b. Discuss about the safety measures adopted for the overall safety of earth moving vehicles. (10 Marks)
- 8 a. Write short notes on :
i) Selection of machines based on soil.
ii) Selection of machines based on weather condition. (10 Marks)
- b. List and explain the different operating costs. (10 Marks)
