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10AU81

Eighth Semester B.E. Degree Examination, July/August 2021
Earth Moving Equipments and Tractors

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. List out the different types of earth moving equipments, mention their respective activities. (08 Marks)
b. Explain the following with simple line diagram.
i) Scrapers
ii) Compactors. (12 Marks)
- 2 a. Sketch and explain the generalized fuel injection system used in earth moving vehicle engines. (10 Marks)
b. Discuss the functions of following in earth moving vehicle engines :
i) Turbochargers
ii) After coolers. (10 Marks)
- 3 a. Compare tyred Vs tracked vehicles. (06 Marks)
b. Draw and explain the under carriage components of a track type vehicle. (09 Marks)
c. Discuss about the suspension system in earth moving vehicles. (05 Marks)
- 4 a. What are the types of final drives? Sketch and explain any one type of final drive. (10 Marks)
b. With a neat sketch, explain the construction and working of a twin counter shaft transmission system. (10 Marks)
- 5 a. Sketch and explain the hydraulic system with basic components. (10 Marks)
b. Write short notes on:
i) Direct acting pressure relief valve
ii) Pressure control valves (10 Marks)
- 6 a. Name the types of power steering and explain any one type in detail. (10 Marks)
b. Explain the working principles of,
i) Articulated steering.
ii) Disc brake system. (10 Marks)
- 7 a. Discuss the importance of maintenance in earth moving vehicles. State the advantages. (10 Marks)
b. Write short notes on :
i) Schedule purpose.
ii) Safety methods in earth moving vehicles. (10 Marks)
- 8 a. Discuss the various methods of selection, of earth moving equipments. (10 Marks)
b. Define productivity. Explain about the improvement of productivity in earth moving vehicles. (10 Marks)

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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.