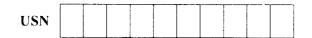
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Eighth Semester B.E. Degree Examination, June/July 2017 Earth Moving Equipments and Tractors

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, 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. 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 applications in tractors.

(10 Marks)

PART - B

- 5 a. Explain the functions of following components in hydraulic systems:
 - i) Pumps ii) control values iii) hydraulic motors iv) hydraulic cylinders.

(10 Marks)

- b. Explain the depth and draft control systems with a simple line diagram.
- (10 Marks)
- 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 mechanism in tractors.
- (10 Marks)
- 7 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)
- 8 a. Discuss the various considerations, while selecting earthmoving equipments for different activities. (10 Marks)
 - b. Write short notes on:
 - i) Operation capacity
 - ii) Productivity of bull dozers.

(10 Marks)

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