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**Eighth Semester B.E. Degree Examination, June/July 2016**  
**Earth Moving Equipment and Tractors**

Time: 3 hrs.

Max. Marks: 100

**Note: 1. Answer any FIVE full questions, selecting  
atleast TWO questions from each part.  
2. Sketches should be drawn with pencil only.**

**PART – A**

- 1 a. Enlist the different types of earth moving equipments. Briefly explain their applications. (08 Marks)
- b. How do you classify the scrapers? Sketch and explain the working of a scraper. (12 Marks)
- 2 a. Write a brief note on :  
i) Automatic Injection Timer      ii) Turbochargers. (10 Marks)
- b. Sketch and explain the working of motor grader. (10 Marks)
- 3 a. With a neat sketch, explain the undercarriage component of a crawler. (10 Marks)
- b. With the help of line diagrams, compare the construction and working of wheeled and crawler tractors. (10 Marks)
- 4 a. What are the types of Final drivers? Sketch and explain any one type of final drive. (10 Marks)
- b. What are the types of PTO shafts? Sketch and explain any one of them. (10 Marks)

**PART – B**

- 5 a. Sketch and explain the hydraulic systems with basic components. (10 Marks)
- b. With a neat sketch, explain the hydraulic depth control mechanism used in tractors. (10 Marks)
- 6 a. Sketch and explain the clutch / brake steering system. (10 Marks)
- b. Sketch and explain the construction and working of Disc brakes used in tractors. (10 Marks)
- 7 a. What are the objectives of maintenance? Explain the various functions and advantages of preventive maintenance. (10 Marks)
- b. With the help of block diagram, explain the organization set up in maintenance department. (10 Marks)
- 8 a. Discuss the various methods used to select the equipments. (10 Marks)
- b. List the factors on which the output of bulldozer depends. Also discuss the calculation of output of a bulldozer in detail. (10 Marks)

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