

# CBCS SCHEME

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15AU741

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019

## Earth Moving Equipments and Tractors

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Explain the construction and working of bull Dozer. (08 Marks)  
b. Discuss the functions of following : i) Excavators ii) Scrapers. (08 Marks)

OR

- 2 a. How Motorgraders and Compactors are useful in the construction of roads? (08 Marks)  
b. Discuss the various attachments of the tractors, mention their applications. (08 Marks)

### Module-2

- 3 a. List out the different working systems of engine, with their functions. (08 Marks)  
b. Distinguish Tyred vehicles Vs Track type of vehicles. (08 Marks)

OR

- 4 a. Draw a neat sketch of undercarriage system of earth moving vehicles and list the components. (08 Marks)  
b. Explain the following :  
i) Rubber spring suspension ii) Air spring suspension. (08 Marks)

### Module-3

- 5 a. Name the basic types of transmissions and explain any one type with figure. (08 Marks)  
b. Explain the construction and working of hydro shift automatic transmission. (08 Marks)

OR

- 6 a. Illustrate the need of final drive and state the various considerations. (08 Marks)  
b. Discuss the purpose of PTO shaft in tractors. (08 Marks)

### Module-4

- 7 a. List out the types of pumps used in hydraulic system and explain any one type with figure. (08 Marks)  
b. Discuss the functions of : i) Flow control valves ii) Direction control valves. (08 Marks)

OR

- 8 a. Write short notes on :  
i) Hydraulic motors ii) Hydraulic cylinders. (08 Marks)  
b. Sketch and explain the working of Depth and Draft control system. (08 Marks)

### Module-5

- 9 a. Discuss the methods of selecting the earth moving equipments. (08 Marks)  
b. Explain the factors affecting the productivity of a bull dozer. (08 Marks)

OR

- 10 a. Explain the types of maintenance and their importance. (08 Marks)  
b. Discuss the various safety measures adopted for earthmoving vehicles. (08 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.