15AU741

Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020 **Earth Moving Equipment & Tractors**

Time: 3 hrs.

TEO

Max. Marks: 80

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

Module-1

List out the different types of Earth Moving Equipments, mention their respective activities.

How do you classify shovels? Explain the working, construction and application of a shovel, (08 Marks) with neat sketch.

Explain the following with simple line diagram: 2 Compactors.

(08 Marks)

Scrapers. (ii) What are the applications of Motor grader and rollers? b.

(08 Marks)

Module-2

Sketch and explain the generalized fuel injection system used in Earth Moving Vehicle 3 (08 Marks)

Discuss the functions of following in earth moving vehicle engines:

Turbo charger. (i)

After coolers. (ii)

(08 Marks)

OR

Compare tyred V/s tracked vehicles.

(08 Marks) (08 Marks)

List and explain advantages and disadvantages of wheeled and crawler tractors.

Module-3

With a neat sketch, explain the construction and working of a twin counter shaft 5 (08 Marks) transmission system.

List the basic types of transmission used in earth moving vehicles and explain planetary (08 Marks) transmission.

Explain with neat sketches, single and double reduction final drive.

(08 Marks)

What is PTO shaft? Explain the working and applications in tractors.

(08 Marks)

Module-4

List out basic components of hydraulic system and explain control valves. 7

(08 Marks)

List out types of pumps and explain any 2 types.

(08 Marks)

Explain the depth and draft control systems with a simple line diagram. 8

(08 Marks)

Explain hydraulic motors and hydraulic cylinders.

(08 Marks)

Module-5

Discuss the classification of soils. 9

(08 Marks)

Discuss the various considerations, while selecting earth moving equipments for different (08 Marks) activities.

OR

Explain briefly operation capacity. 10

(08 Marks)

Explain briefly productivity of Bulldozers.

(08 Marks)

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.