

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (E-I 2011 Onwards) (Sem.–6)
TRACTORS AND EARTH MOVING MACHINERY
Subject Code : BTAE/DE-613
Paper ID : [A2388]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**1. Write briefly :**

- a) What do you mean by special purpose vehicles?
- b) What is degree of freedom in designing of steering system?
- c) Sketch planetary transmission system.
- d) What are the functions of gear reduction box?
- e) Name the safety devices used in mobile cranes.
- f) What do you mean by tractor stability?
- g) Classify the tyres.
- h) What are truck cranes?
- i) Why lubrication of tractor engine is necessary?
- j) What is the role of link in steering system?

SECTION-B

2. Classify the special purpose vehicles. Discuss in brief.
3. Discuss the battery ignition system of a tractor in detail with the help of neat sketches.
4. What do you mean by power transmission? Discuss compound transmission in brief.
5. Discuss the constructional and working features of front end loader.
6. How tractors are classified? Discuss the drum type brakes of tractor.

SECTION-C

7.
 - a) State and explain the specifications of tyres.
 - b) Explain the weight distribution of a tractor to maintain its stability in details.
8.
 - a) Explain the basic characteristics of truck cranes.
 - b) What is PTO shaft? Discuss its functions in brief.
9. Write short note on **any two** of the following :
 - a) Differential lock
 - b) Articulated vehicles
 - c) Ripper