

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – SUMMER 2014

Subject Code: 180203**Date: 31-05-2014****Subject Name: Special Purpose Vehicles****Time: 10:30 am TO 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain the working of hydraulic brake system with neat sketch. **07**
(b) Explain series hybrid electric drive train with various operation modes. **07**

- Q.2** (a) List the various special purpose vehicles. Give the applications of each. **07**
(b) Describe dozer. Explain different types of dozer blades. **07**

OR

- (b) Why PTO shaft is provided in tractor? Explain three standard types of PTO drives. **07**

- Q.3** (a) Explain wheel loader and its various attachments. Give its applications. **07**
(b) Write short note on multi axle vehicles. **07**

OR

- Q.3** (a) Classify the tractor. How tractor is selected? **07**
(b) List the types of steering gear box. Explain any one with neat sketch. **07**

- Q.4** (a) List the types of rechargeable batteries considered for EV and HEV applications. Explain any two. **07**
(b) Write short note on excavator. **07**

OR

- Q.4** (a) What is “Ballasting” of tractor? Give its advantages and explain the methods of Ballasting. **07**
(b) Explain forklift with its uses and operation techniques. **07**

- Q.5** (a) Explain fifth wheel mechanism and describe fifth wheel ratings and capacities. **07**
(b) Write the advantages and disadvantages of hybrid car. **07**

OR

- Q.5** (a) Explain the lattice boom crawler crane with neat sketch and label all the parts. **07**
(b) Explain the various tractor attachments. **07**
