

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII EXAMINATION – SUMMER 2016****Subject Code:170601****Date:16/05/2016****Subject Name:Construction management and Equipments****Time:02:30 PM to 05:00 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)** What is need of construction management? Discuss objectives of construction management. **07**

**(b)** Classify construction equipments on different basis with suitable examples. **07**

**Q.2 (a)** Explain WBS of construction project. Discuss importance of WBS. **07**

**(b)** State limitations of bar chart. What is Line Of Balance. State its application. **07**

**OR**

**(b)** Explain 1. Grade resistance. 2. Coefficient of traction. 3. Rimpull. **07**

**Q.3 (a)** Explain dummy activity. State types of dummy activities with examples. **07**

**(b)** Draw AOA diagram for following data. Determine 1. critical path **07**

2. project duration 3. Prepare table of floats.

Activity (i-j)	1-2	2-3	2-4	3-4	3-5	4-5
Duration in days	8	12	4	6	10	6

**OR**

**Q.3 (a)** Differentiate between 1. CPM and PERT. **07**

2. Resource smoothing and resource leveling.

**(b)** Determine optimum cost and corresponding project duration for the given data. **07**

Activity	Normal time	Normal cost	Crash time	Crash cost
1-2	3	12000	2	16000
1-3	6	18000	3	24000
2-4	2	20000	1	23000
3-4	4	16000	2	21000
4-5	5	30000	4	35000
Indirect cost = Rs. 3000/day.				

**Q.4 (a)** Enlist methods of depreciation. Explain any one method with suitable example. **07**

**(b)** Classify bulldozers. State uses of bulldozers on construction projects. **07**

**OR**

**Q.4 (a)** Differentiate between power shovel and dragline with sketches. **07**

**(b)** Discuss factors affecting output of HOE. **07**

**Q.5 (a)** What is job layout? State factors affecting job layout. **07**

**(b)** Classify dump trucks on method of dumping. State selection factors for rear dump trucks. **07**

**OR**

**Q.5 (a)** Sketch typical belt conveyor system. Explain functions of following components of BCS. 1. Idlers. 2. Feeder. 3. Snub pulley. **07**

**(b)** Discuss safety measures for 1. Excavation. 2. Demolition. **07**

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