

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (OLD) EXAMINATION – WINTER 2018

Subject Code: 170601

Date: 03/12/2018

Subject Name: Construction Management And Equipments

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) Discuss objectives of construction management. Explain Planning, Scheduling & Controlling as a function of Construction Management. **07**
- (b) What do you mean by Updating ? When updating is required? **07**
- Q.2** (a) The details of Project is given as follows: **07**

Activity Arrow i-j	1-2	1-3	1-4	2-5	2-7	3-4	3-6	4-5	5-6	5-7	6-7	7-8
Duration	6	7	8	7	8	4	4	9	5	6	6	9

Prepare the network diagram with the estimated durations of various activities. Determine Total float & free floats for each activity and Critical path for the network.

- (b) Define the term : Direct cost, Indirect cost , Outage loss & Cost slope. How will you determine Cost Slope? **07**
- OR**
- (b) What do you mean by Resource allocation? What are the objectives of resource allocation? Explain step by step process for resource leveling. **07**
- Q.3** (a) What is meant by mile-stone chart? How does it differ from bar chart? How it is developed? **07**
- (b) What is dragline? Give its basic parts. **07**
- OR**
- Q.3** (a) Define: head event, tail event, dual role event, successor event, merge event, burst event & Predecessor event, giving example of each. **07**
- (b) What are the uses of power shovel? Describe basic parts and operation, giving neat sketch. **07**
- Q.4** (a) Define term : Optimistic time, Pessimistic time, Most Likely time, Mean, Deviation, Variance & Standard deviation. **07**
- (b) A company has purchased an equipment whose first cost is Rs.1,00,000 with an estimated life of 8 years. The estimated salvage value of the equipment at the end of its life time is Rs. 20,000. Determine the depreciation charge and book value at the end of various years using the straight line method of depreciation. **07**
- OR**
- Q.4** (a) What are the precautionary measures adopted to reduce the accidents during construction? **07**
- (b) Explain the term “ Job Layout” and draw a job layout for a construction site of a large multistoreyed building. **07**

- Q.5 (a) Discuss the factors affecting the selection of construction equipments. **07**
(b) Write short notes on (i) Dumpers, (ii) Trailors or Wagons. **07**

OR

- Q.5 (a) Differentiate between Reciprocating Pump & Centrifugal Pump. **07**
(b) Differentiate between (i) Cable control Verses Hydraulic control bulldozer **07**
(ii) Crawler mounted verses Wheel Mounted bulldozers.

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