GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION - WINTER 2015

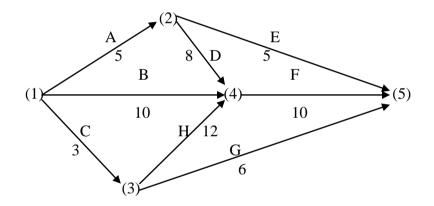
Subject Code: 170601 Date:12/12/2015

Subject Name: Construction Management and Equipments

Time: 10:30am to 1:00pm Total Marks: 70

Instructions:

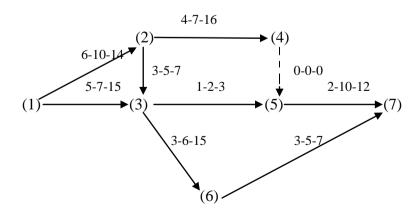
- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.
- Q.1 (a) Define management and explain six major function of construction management.
 - (b) Enlist various project management techniques and explain with the help of suitable example the preparation of bar chart.
- Q.2 (a) For the network shown in the fig. , find out critical path and determine free float of and total float for each activity.



(b) Explain the resource scheduling and write advantages of project scheduling.

OR

(b) The network for a project is shown in fig. below. Calculate the expected time for each path. Which path is critical? Draw the network showing expect time.



Q.3 (a) How the 'S' curves are used to analyse the cash requirement of a project?

07

07

	(b)	What do you understand by job layout? What are the factors affecting the job layout?	07
		OR	
Q.3	(a)	Enlist the different types of activities and events. Also give difference of activity and event with suitable example.	07
	(b)	Enlist various safety codes to be used to reduce the accidents at various construction site.	07
Q.4	(a)	List the plants and equipments used in construction and state factors affecting in selection of construction equipment.	07
	(b)	For a concrete dam construction 2 millions tones of aggregates will be required. The estimate for construction of road is Rs. 50 lacs. Hauling charges of stone aggregate is Rs. 20/ton for truck. The cost of belt conveyor is Rs. 80 lacs and its salvage value is 20% of the original purchase cost. Maintenance and repair charges are 30% of depreciated value and electrical power bill is 60% of original cost of conveyor. Which is the best alternative for hauling aggregate – Truck or belt conveyor?	07
		OR	
Q.4	(a)	Explain economical life of construction equipments.	07
V. -1	(b)	Define depreciation and calculate depreciated cost and book value at the end of third year for a concrete mixture purchased at a price of Rs. 1,20,000. Assuming its life 10 years and salvage value as 10% of purchase price.	07
Q.5	(a)	Define (i) Compaction (ii) Void ratio (iii) Saturated unit weight (iv) Grade resistance (v) Rimpull	07
	(b)	How many cubic meters of earthen embankment can be constructed at a void ratio of 0.60 from 1,50,000 m ³ of soil from borrow pit that has void ratio of 0.90?	07

What is dragline? State factors affecting the output of a dragline.

factors affecting selection of pump.

Q.5

(a)

(b)

OR

What is basic difference between centrifugal pump and reciprocating pump? State

07

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