SL-257

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B.E. (Civil) (Semester-VII) (Revised)
Examination, May – 2017
PROJECT MANAGEMENT AND CONSTRUCTION EQUIPMENT
Sub. Code : 67561

Day and Date : Thursday, 18-05-2017   **Total Marks : 100**
Time : 2.00 p.m. to 5.00 p.m.

Instructions :   1)   Attempt any THREE questions from each section.
                      2)   Figures to the right indicate full marks.

SECTION-I

Q1) a)   Explain 'Network Compression' step-by-step.   **[8]**

b)   A network consists of the following activities and their durations of a small project. Draw the network, mark critical path and calculate T.F. and F.F.   **[9]**

Activity	1-2	2-3	2-4	3-6	3-7	4-5	4-6	5-7	6-7
Duration in weeks	2	4	5	6	5	4	1	3	2

Q2) a)   What is the 'Concept of Probability' in P.E.R.T.? Explain the three time-estimates used in P.E.R.T.   **[8]**

b)   How P.E.R.T. is different than C.P.M.?

Following data pertains to a project. Draw the PERT network and calculate the value of standard deviation for the critical path.   **[9]**

Activity	Optimistic time	Most likely time	Pessimistic time
1-2	6	9	18
1-3	5	8	17
2-4	4	7	22
2-5	4	7	10
3-4	4	7	16
3-5	2	5	8
4-5	4	10	22

P.T.O.

Q3) a) Enlist the causes of accidents in construction industry. **[8]**

b) Define 'Risk Management'. Explain the steps of 'Risk Mitigation'. **[9]**

Q4) Write notes on any FOUR. **[16]**

a) Objectives of Project Management

b) Floats

c) W.B.S.

d) Safety Training

e) Risk Identification Process

SECTION-II

Q5) a) Explain the factors governing the selection of construction equipment.**[8]**

b) Explain the working of a Hoe with a neat sketch. **[9]**

Q6) a) Explain the necessity of compactors in construction projects. Enlist various compacting equipment and explain any ONE in detail with sketch. **[8]**

b) Explain construction and working of Tower Crane with detailed sketch.**[9]**

Q7) a) Explain the working of a Jackhammer with neat cross-section. **[8]**

b) Explain (i) Drilling pattern, (ii) Explosives (iii) Detonators in rock excavation. **[9]**

Q8) Write notes on any FOUR. **[16]**

a) Use of Bulldozers in construction project

b) Clamshell

c) Rippers

d) Well point system of dewatering

e) Use of compressed air in construction

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