

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- September 2016

B.Tech V Semester

COURSE CODE: 10B11CE515

MAX. MARKS: 15

COURSE NAME: Construction Technology and Management

COURSE CREDITS: 04

MAX. TIME: 1Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Show calculations in tabular form.

1. Compare wheel mounted excavators with crawler mounted excavators. Also illustrate the role of each equipment part installed in a pneumatic roller used as compaction equipment. [2.5]
2. Write a short note on various types of contracts used in construction industry. [2.5]
3. Draw the network and determine: expected completion time, variance, event times, slack and critical path for the following project. [5]

Activity	A	B	C	D	E	F	G	H
Predecessors	-	-	A	B	A	C, D	C,D,E	F
t_o (days)	1	1	3	1	1	2	2	6
t_p (days)	7	9	9	3	9	6	10	6
t_m (days)	4	5	6	2	2	4	9	6

4. A construction work consists of activities with PERT durations in days as given below: [5]

Activity	P	Q	R	S	T	U	W	Y	Z
Predecessors	-	P, T	Q	-	S	-	S	S	U, W
t_o (days)	3	4	4	3	8	1	2	4	6
t_m (days)	6	8	5	3	14	4	5	7	15
t_p (days)	9	9	9	3	17	7	14	13	30

Determine:

- a) The probability of completing the job in 32 days
- b) The completion time with 50% probability

Normal Deviate (+)	Probability (%)
1.1	86.4
1.2	88.5
1.3	90.3
1.4	91.9
1.5	93.3