

## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- SEPTEMBER, 2016

M.TECH I SEMESTER

COURSE CODE: 10M11CE113

MAX. MARKS: 15

COURSE NAME: CONSTRUCTION PLANNING &amp; CONTROL

COURSE CREDITS: 03

MAX. TIME: 1 HR

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*Note: All questions are compulsory. Draw figures and sketches to illustrate your answers. Assume missing data suitably if required. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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1. State – True/False? 4 x 0.5 = 2
- a) Length of arrow has significance in A-O-A network diagram
  - b) An event consumes time or resources
  - c) A-O-N network diagram eliminates use of dummies
  - d) Critical path method technique is deterministic in nature
2. Consider the following statements: [1]
- i. A dummy activity is artificially introduced in a network when necessary.
  - ii. A dummy activity consumes some time.
  - iii. A dummy activity is represented by a dotted arrow
  - iv. A dummy activity must necessarily be introduced in every network
- Which of these statements are correct?
- a) i, ii and iii    b) i and iii    c) ii, iii and iv    d) i and ii
3. Consider the following statements and choose correct option/options: [1]
- i. Bar chart is event oriented                      ii. Bar chart is activity oriented
  - iii. Length of the bar represents the time required for completion of that activity
4. Discuss the looping error and dangling error in network diagram. [2]
5. Discuss different phases of a construction project. [3]

6. The data for planning a project by network technique is given below:

[6]

Activity	Duration (in weeks)	Predecessor
A	4	-
B	2	A
C	2	B,F
D	2	C,L
E	6	D,H
F	2	A
G	2	F
H	3	G,L
K	5	A
L	3	F,K

For the above data, answer the following:

- Draw the A-O-A network diagram
- Calculate total float and free float for each activity
- State the critical path and critical duration