

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- Oct 2017

B.Tech 5<sup>th</sup> Semester

COURSE CODE:10B11CE515

MAX. MARKS:15

COURSE NAME: Construction Technology and Management

COURSE CREDITS: 4

MAX. TIME: 1 Hr

*Note: All questions are compulsory. Carrying of mobile phone or sharing of materials during examinations will be treated as case of unfair means.*

Q 1. Differentiate between Programme Evaluation Review Technique (PERT) and Critical Path Method (CPM). (Minimum five points) [ 2 Marks]

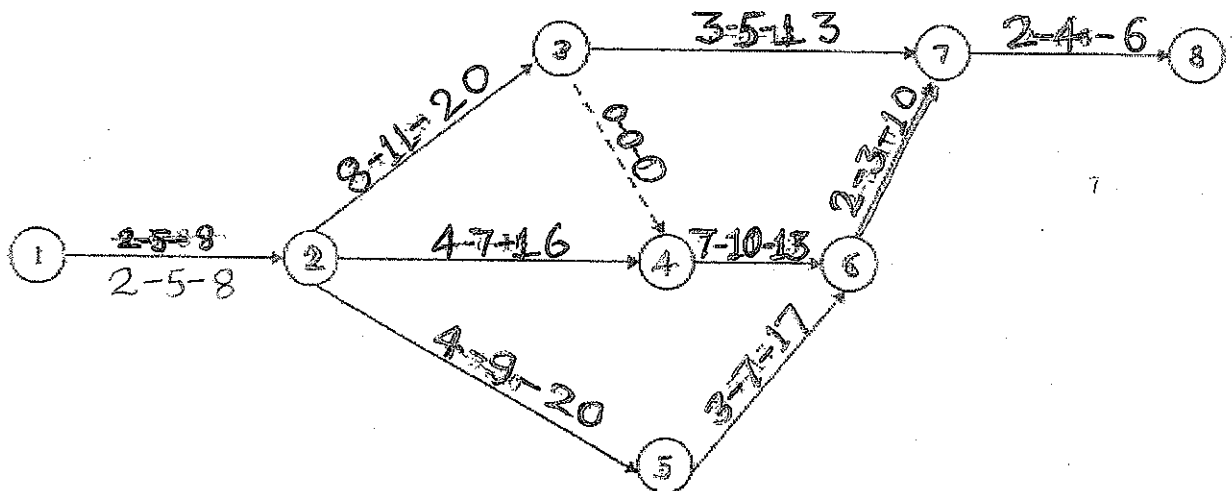
Q 2. Define [ 3 Marks]

- Item Rate Contract
- Lump-sum contract
- Arbitration

Q 3. Construct an activity on arrow network based on the activity descriptions below. [ 5 Marks]

- The predecessors to Activity Z2 are Activities L , C and R.
- The successors to Activity B are Activities E1 , S , W and D2.
- Activity E1 also depends on Activity M.
- Activity U and F follow Activities W and D2, and precede Activities E and R1
- Activity Y follows Activities C and R and followed by Activity L.
- Activitie D , M and B starts the project.
- Activity C can start when Activities D , E1 and S are completed.
- Activity R cannot begin until Activity W is finished.
- Activitiy I follows Activity D and preceds Activity L.
- Activity E follows Activities C and R.

Q 4. Figure below shows the network for construction project. [ 5 Marks]



- Determine the critical path and its standard deviation.
- Compute the time duration that will provide 95% probability of its completion in time.

Z(+)	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7
Prob. (%)	81.59	84.13	86.43	88.49	90.32	91.92	93.32	94.52	95.54

CE-7, BT