

## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

## TEST -3 EXAMINATION, 2016

## B.TECH VIII/ M.TECH II SEMESTER

COURSE CODE: 10M11CE211

MAX. MARKS: 35

COURSE NAME: CONSTRUCTION CONTRACTS AND LAWS

COURSE CREDITS: 03

MAX. TIME: 2 HRS

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

1. Briefly describe the following contract documents and explain their importance in a construction project? [4]
  - i. The contract drawings
  - ii. The specification
  - iii. The general conditions of contract
  - iv. The special conditions of contract
2. Differentiate between various terms given below with suitable definition and with example where required [4]
  - i. Conciliation and Arbitration
  - ii. Claim, counterclaim and dispute
3. Briefly describe on price escalation clause in a contract taking care of material price escalation, labor wage escalation and fuel price escalation. Show mathematical expression for calculating variation in material cost, labor cost and fuel cost. [5]
4. Write short notes on [4]
  - (i) Defects liability period (ii) Performance Guarantee
5. Explain the importance of pre-bid meeting in the bidding process? [2]
6. The table given below shows the past behavior in 15 bids of a typical contractor against you as a contractor. (B/TC ratio indicates  $\frac{\text{Competitor's bid price}}{\text{Your estimated total cost}}$ ) [12]

B/TC	Number of bids
0.98	1
1.00	1
1.02	2
1.04	2
1.06	1
1.08	4
1.12	1
1.16	2
1.20	1

- i. Based on the given behavior, what is the markup value that this competitors uses on average? What is the probability of winning against this competitor if you use a markup of 12 percent?
- ii. In a new project with an estimated cost of Rs 50,000,000 what is your optimum markup strategy against four typical competitors using Friedman's model? What is the expected markup amount at optimal mark up?
- iii. In the same project what is your optimum markup strategy against four typical competitors using Gate's model? What is the expected markup amount at optimal mark up?
- iv. What would be your suggested markup level?  
Percentage probability corresponding to probability factor can be calculated from the table given below:

Z (probability factor)	% probability	Z (probability factor)	% probability
0	50	0	50
-0.1	46	0.1	54
-0.2	42.1	0.2	57.9
-0.3	38.2	0.3	51.8
-0.4	34.5	0.4	65.5
-0.5	30.8	0.5	69.2
-0.6	27.4	0.6	72.6
-0.7	24.2	0.7	75.8
-0.8	21.2	0.8	78.8
-0.9	18.4	0.9	81.6
-1.0	15.9	1.0	84.1
-1.1	13.6	1.1	86.4
-1.2	11.5	1.2	88.5
-1.3	9.7	1.3	90.3

7. List six reasons leading to disputes and six advantages of arbitration over litigation. [4]