JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION

M.Tech. IInd Semester

COURSE CODE: 10M11CE213   MAX. MARKS:15

COURSE NAME: CONSTRUCTION COST ANALYSIS

COURSE CREDITS: 03   MAX. TIME: 1Hour

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

Q.1   What is benefit-cost analysis? Explain with an example. Write all formulae for conventional B/C ratio.   (3 marks) CO-1

Q.2   The cash flow details of a public project is as follows   (5 marks) CO-1,2
Initial cost = Rs.40000000
Annual operating cost = Rs.2200000
Worth of annual benefits = Rs.5500000
Worth of annual dis-benefits = Rs.1500000
Salvage value = Rs.5500000
Interest rate per year = 12% and useful lie = 40 Years
Using benefit-cost ratio method find out the economical acceptability of the public project. Use PW, AW and FW methods to find out the equivalent worth of costs, benefits and disbenefits.

Q.3   Explain Parametric Cost Estimate Models with an example.   (2 marks) CO-1

Q.4   Use the time and location indices shown below to estimate the cost of a building that contains 32500 m2 of floor area. The building is to be constructed 2 years from now in City A. The cost of a similar type of building that contained 48300 m2 was completed last year in City C for a cost of 3,308,500.   (3 marks) CO-1,2

Construction economic trends   Locations cost indices

Year	Index
3 years ago	358
2 years ago	359
1 year ago	367
Current year	378

Location	Index
City A	1.025
City B	1.170
City C	1.260
City D	1.105
City E	1.240

Q.5 Use the weighted unit cost to determine the conceptual cost estimate for a (2 marks) proposed parking that is to contain 200 parked cars. Previous projects data are CO-1 given in Table

Project No.	Cost	No. of cars
1	1500000	90
2	2000000	125
3	1850000	170
4	2800000	220
5	1750000	180

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