Santu kar

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION, 2017

M.TECH II SEMESTER

COURSE CODE: 10M11CE214 MAX. MARKS: 25

COURSE NAME: CONSTRUCTION FINANCIAL MANAGEMENT

COURSE CREDITS: 03 MAX. TIME: 1.5 HRS

Note: *All questions are compulsory. Draw figure, sketches and give suitable example to illustrate your answers. Assume missing data suitably if required. Interest table signed by the course coordinator, is allowed in the examination.*

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1. Two equipments 'A' and 'B' have the capability of satisfactorily performing a required function. Equipment 'B' has an initial cost of Rs 160,000 and expected salvage value of Rs 20,000 at the end of its 4 year service life. Equipment 'A' costs Rs. 45,000 less initially, with an economic life 1 year shorter than that of 'B'; but 'A' has no salvage value, and its annual operating costs exceed those of 'B' by Rs 12,500. When the required rate of return is 15%; state which alternative is preferred when comparison is by
   a) The common multiple method
   b) A 2 year study period (assuming the assets are needed for only 2 years. [8]
2. A supplier of prefabricated railway sleepers procures each piece of sleeper for Rs. 4,000. The demand for sleepers is 350 units every year for three years. Equipment to manufacture sleepers is available for Rs. 18 lakh. The annual operating cost for producing 350 sleepers is estimated to cost Rs. 7 lakh for year 1, with 10 percent increase every year for years 2 and 3. If the equipment has no salvage value at the end of three years, should the supplier continue to outsource it or should he buy the equipment and start producing the sleepers on his own? The minimum attractive rate of return is 15 percent. [5]
3. Write short notes on benefit-cost ratio. [2]
4. Describe capitalized equivalent method and its usefulness? [3]
5. A government is planning for a hydroelectric project that will also provide flood control, irrigation and recreation benefits, given as below. The interest rate to be used for the

analysis is five percent. Check the economic viability of alternatives and also, choose the best alternative. (values are in Rs. Million) [7]

Alternatives	X	Y	Z
Initial cost	150	250	400
Annual power sales	8	10	16
Annual flood control	2	3	4.5
Annual irrigation benefit	3	4	5.5
Annual recreation benefit	1	1.5	2.5
Annual operation and maintenance	1.5	2	2.5
Life of project	30 years	40 years	60 years