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MANIPAL INSTITUTE OF TECHNOLOGY
Manipal University, Manipal – 576 104



VI SEM. B.TECH. DEGREE (COMMON TO ALL BRANCHES)
SECOND TEST

SUBJECT: ESSENTIALS OF MANAGEMENT AND ENGINEERING ECONOMICS
(HSS-302)
REVISED CREDIT SYSTEM
(26/03/2016)

Time: 1 Hour

MAX.MARKS: 20

Instructions to Candidates:

- ❖ Answer **all the questions**.
- ❖ Missing data, if any, may be suitably assumed & justified.

- 1 Which of the following does not come under "On the job training"? (1)
(Apprenticeship programme, Vestibule training, Internship training, Job rotation)
- 2 Which of the following is not an element of delegation? (1)
(Accountability, Authority, Responsibility, Informal organization)
- 3 _____ consists of a group of tasks that must be (1)
performed for an organization to achieve its goals.
(Organizing, Job, Grouping, Recruitment, Placement)
- 4 The annual equivalent of an income stream of \$1,000 per year for the (1)
next three years at an interest rate of 12% is, _____.
(i) \$1,000(A/P, 12, 3) (ii) >\$1,000 per year
(iii) \$1,000 per year (iv) <\$1,000 per year
- 5 Two options are available for painting your house. (a) Oil based (1)
painting, which costs \$5,000 and (b) Water based painting which costs
\$3000. The estimated lives are five years and ten years respectively.
For either option no salvage value will remain at the end of respective
service lives. Assume that you keep and maintain the house for ten
years. If your personal interest rate is 10% per year, which of the
following statement is correct.
(i) On an annual basis, option (a) will cost about \$850
(ii) On an annual basis, option (b) is about \$22 cheaper than
option (a)
(iii) On an annual basis both options cost about the same.
(iv) On an annual basis option (b) will cost about \$820

- 6 When you become a manager, what criteria will you favor to determine your span of management? (Mention any four factors). (2)
- 7 Explain how you will organize a Pro-show for a college fest clearly highlighting the steps in organizing. (3)
- 8 Suppose you are an HR Manager in a Supermarket. Prepare the job description and job specification for the role of a Store Manager. (2)
- 9 A patriotic group of fire fighters is raising money to install a permanent (i.e. infinite life) monument in New York City to honor those killed in the line of duty. The initial cost of the monument will be \$150,000, and the annual maintenance will cost \$5,000. There will be an additional one-time cost of \$20,000 in two years to add names of those who were missed initially. At an interest rate of 6% per year compounded semi-annually, how much money must they raise now in order to construct and maintain the monument forever? (2)
- 10 The Maintenance and Operations (M&O) cost of front-end loader working under harsh environment conditions tends to increase by a constant \$1200 per year for the first five years of operation. For a loader that has a first cost of \$39,000 and first year M&O cost of \$17,000, compare the equivalent annual worth of a loader kept for four years with one kept for five years at an interest rate of 12% per year. The salvage value of a used loader is \$23,000 after four years and \$18,000 after five years. (3)
- 11 Consider two investments A & B which are mutually exclusive with the following sequence of cash flows, (3)

Period, N	Net Cash Flow	
	Project A	Project B
0	-\$1,20,000	-\$1,00,000
1	\$20,000	\$48,000
2	\$20,000	\$48,000
3	\$70,000	\$48,000
4	\$80,000	\$48,000

- (i) Compute the IRR for each investment.
- (ii) At a MARR of 15%, determine the acceptability of each project.