[5253] - 540

T.E. (Computer Engineering)
Information Systems and Engineering Economics
(2015 Pattern) (End Semester)

Time : 2½ Hours]   *[Max. Marks :70*

Instructions to the candidates:

1) *Answer Q.1 or Q.2, Q3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.*
2) *Neat diagram must be drawn whenever necessary.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data if necessary.*
5) *Use of Scientific Calculator is permitted.*

Q1) a) Explain different challenges for the Information Systems manager.**[5]**

b) Explain DSS (Decision Support system) in detail.   **[5]**

OR

Q2) a) List and explain characteristics of a Transaction Processing System.**[5]**

b) What is ICT and explain its role in rural development.   **[5]**

Q3) a) What is metadata? Give its importance.   **[5]**

b) What is outsourcing? Specify the benefits of outsourcing.   **[5]**

OR

Q4) a) Explain the concept of Supply Chain Management.   **[5]**

b) Explain Decision making with the help of an Management Information System.   **[5]**

Q5) a) What Makes Economic Decisions different from other Design Decisions?   **[8]**

b) Explain the following,   **[8]**
   i) time value of money
   ii) earning power
   iii) purchasing power
   iv) Inflation

P.T.O.

Q6) a) State and explain in short the four fundamental principles that are followed in any engineering economic decision? **[8]**

b) Explain the terms,, simple interest or compound interest with correct equations. Suppose you deposit Rs. 1,000 in a banks savings account that pays interest at a rate of 8%'per year. Assume that you don't withdraw the interest earned at the end of each period (year), but instead let it accumulate for 3 years. Depict all the returns calculations based on (i) simple interest and (ii) compound interest? **[8]**

Q7) a) List and explain the five main types of engineering economic decisions.
[8]

b) Explain the following with proper examples, **[8]**
   i) Economic Equivalence
   ii) Cash Flows

OR

Q8) a) Explain Capital Expenses (Cap Ex) and Operating Expenses (Op Ex) with proper examples. **[8]**

b) Assume you borrowed Rs. 21,000 to finance your educational expenses for your remaining year of college. The loan has to be paid off over five years. The loan carries an interest rate of 6% per year and is to be repaid in equal annual installments over the next five years. Assume that the money was borrowed at the beginning of the year and that the first installment will be due a year later. Compute the amount of the annual repayment installments. Depict all the necessary cash-flows correctly. **[8]**

Q9) a) Explain various financial statements with their needs. **[8]**
b) What is the importance of having cash-flow statements? What points do they depict. **[10]**

OR

*Q10)*a) Explain various patterns of cash-flows with correct examples. What are Positive and Negative cash flows. **[8]**

b) What is Depreciation. **[10]**
A company ABC Ltd. purchased a machine costing Rs. 1000 on 1st January 2001. It had a useful life of three years over which it generated

annual sales of Rs. 800. ABC Ltd's annual costs during the three years were Rs. 300. Its income statement at the end of the three years looks as follows,

Income Statement	2001	2002	2003
Sales	800	800	800
Cost of Sales	(300)	(300)	(300)
Fixed Asset Cost	(1000)	-	-
Net Profit (Loss)	(500)	500	500

Instead of charging the entire cost of fixed asset at once, if ABC Ltd. depreciates the capital expenditure over its useful life, depict the corresponding Income Statement and Balance Sheet at the end of the three years.

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