Total No. of Questions : 10]

SEAT No. :

P3384

[Total No. of Pages : 3

[5353] - 584

TE. (Computer Engineering)

Information Systems And Engineering Economics

(2015 Course) (End Semester)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q4, Q.5 Q.6, Q.7 or Q8, Q.9 or Q10***
2) ***Neat diagrams 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 various factors that influence technology selection for an Information System. **[5]**

b) Describe the difference between the centralized versus decentralized management of IT. **[5]**

OR

Q2) a) Describe technologies used for handling security of an Information System. **[5]**

b) How is an secure environment created for using an Information System. **[5]**

Q3) a) Explain different challenges of data management. **[5]**

b) Explain characteristics of Supply Chain Management Systems. **[5]**

OR

Q4) a) Give examples of ICT solutions used for development projects. **[5]**

b) What are the main challenges of designing e-governance systems? **[5]**

P.T.O.

Q5) a) How are Cash-Flow based Capital Expenditure decisions taken in a Company? **[8]**

b) State and explain in short the five main types of engineering economic decisions. **[8]**

OR

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

b) Explain Economic Equivalence. **[8]**

Given the following two offers that are at hand,

i) Two payments of Rs. 20,000 now with i = 9%, and Rs. 50,000 at the end of 10 years.

ii) 10 equal annual payments of Rs. 8,000 each.

Using Cash-Flow diagrams depict and explain the economical equivalence of the two offers. Are they same, if yes, how, if they are not similar, which offer is better and why?

Q7) a) Explain Present worth and Future worth. **[8]**

For a company the incoming cash flows are as follows,

Start-up capital — 100 Lakhs, year one 80 Lakhs, year two 120 Lakhs, year three 150 Lakhs, year four 200 Lakhs, year five 100 Lakhs.

Compute the equivalent worth at year three if the annual interest rate is at 10%.

b) Explain various types of Cash Flows with proper examples. **[8]**

OR

Q8) a) Explain Capital Expenditures (CapEx) and Operating Expenses (OpEx) with proper examples. **[8]**

b) A company can earn 10% on a lump sum deposited now, and it wishes to withdraw the money in the following way,

Year 1: Rs. 25,000 to purchase a computer,

Year 2: Rs. 3,000 to purchase additional hardware,

Year 3: No expenses,

Year 4: Rs. 5,000 to purchase software upgrades.

How much money must be deposited now-in order to cover the anticipated payments over the next four years? **[8]**

Q9) a) Explain various financial statements with their needs. **[8]**

b) List various financial 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) Suppose you deposit Rs. 5,000 in a banks savings account at the end of each year for the next 5 years, The back pays interest at a rate of 6% per year. Assume that you don't withdraw the interest earned. How much can be withdrawn at the end of five years? Depict the necessary cash flow diagram. Show ending balances after each year in a proper tabulated manner. **[10]**