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(July)

COMPUTER APPLICATION

(Honours)

(**Software Engineering**)

(BCA-401)

Marks : 75

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

Answer *any two* questions

1. (a) What is a system? Write a short note on the types of system. 1+3=4
- (b) Write a note on any five roles that a system analyst has to perform. 5
2. (a) What is an information system? Explain MIS organization. 1+5=6
- (b) What are the activities performed during feasibility analysis of a new system? 3

3. (a) Distinguish between real time and distributed systems. 2+2=4
- (b) Write a note on the elements of a system. What is system boundary? 4+1=5

UNIT—II

Answer *any two* questions

4. (a) What is the importance of having a software life cycle model? 2
- (b) What is software crisis? Briefly elaborate the four factors that have contributed to the making of the present software crisis. 1+4=5
5. With the help of a diagram, explain the evolutionary model of software development. What are its merits and demerits? 5+2=7
6. (a) Under what circumstances would a software developer opt for prototyping model? 3
- (b) Explain the tasks undertaken during the design phase of waterfall model. 4

(3)

UNIT—III

Answer *any two* questions

7. (a) List out the major shortcomings of function point metric in order to use it as a software project size metric. 4
- (b) What is modularity? “A module should be highly cohesive and lowly coupled”. Explain this sentence. 2+3=5
8. (a) Give brief explanation of risk management. 3
- (b) Bookstores get a trade discount of 25% if the order is for 6 copies or more. For orders from libraries and individuals, 5% discount is allowed on orders of 6–19 copies per book title; 10% on orders for 20–49 copies per book title and 15% on orders for 50 copies or more per book title. Develop a decision tree for the above process description. 6
9. (a) Draw diagrams and elaborate on the differences between democratic team organization and mixed control team organization. 5
- (b) Explain when you should use PERT charts and when you should use Gantt charts while you are performing the duties of a project manager. 4

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(Turn Over)

(4)

UNIT—IV

Answer *any two* questions

10. (a) What are the symbols used for constructing a DFD? Briefly elaborate on some of the shortcomings of the DFD model. 2+3=5
- (b) What is the purpose of a data dictionary? 2
11. (a) Compare the relative advantages of textual and graphical user interfaces. 4
- (b) What are the differences between a flow chart and a structure chart? 3
12. (a) What is functional decomposition? Explain the main functions of structured analysis and structured design. 2+2=4
- (b) Write a short note on Graphical User Interface (GUI). 3

UNIT—V

Answer *any one* question

13. (a) What is meant by code review? Why is it required to be completed before performing system testing? 4+2=6

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(Continued)

(5)

- (b) What factors determine the reliability of software? 2
- (c) Explain what is meant by software quality management. 3
14. (a) Distinguish between integration testing and system testing. 4
- (b) Explain software reverse engineering. 3
- (c) What is debugging? Distinguish between fault and failure. 2+1+1=4
