2022

(May/June)

COMPUTER SCIENCE

(Honours)

(Software Engineering)

(CS–601 T)

Marks : 37

Time : 2 hours

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

Answer **one** question from each Unit

UNIT—I

1. *(a)* What is a system? What is system analysis? What are the characteristics of a system?   1+1+2=4

   (b) Who is a system analyst? Elaborate on any three roles of a system analyst.

   ½+3=3½

(*Turn Over*)

2. (a) What is an information system? With the help of a diagram, explain MIS. 1+4½=5½

(b) Briefly explain the importance of a feasibility study. 2

UNIT—II

3. (a) Identify the two important techniques that software engineering uses to tackle the problem of exponential growth of problem complexity with its size. 2

(b) Explain the prototyping model for software development, highlighting its advantages and disadvantages. 4½

4. With the help of a diagram, explain the Waterfall model of software development. What are its merits and demerits? 4½+2=6½

UNIT—III

5. (a) Elaborate on the requirement gathering and analysis activity. 3

(b) Write down the differences among organic, semidetached and embedded software product. 3

(c) Give a brief explanation on the classification of cohesiveness of a module. 2½

6. (a) Explain when you should use PERT charts and when you should use Gantt charts while you are performing the duties of a project manager. 2½

(b) List some important activities that a software project manager performs during software project planning. 3

(c) Bring out the differences between chief programmer team structure and democratic team structure. 3

UNIT—IV

7. (a) What are the symbols used for constructing a DFD? Briefly elaborate on some of the shortcomings of the DFD model. 1+3=4

(b) Mention the differences between activity diagram and state chart diagram. 3½

8. (a) What are the differences between a flow-chart and a structure chart? 2½

(b) Compare the relative advantages of textual and graphical user interfaces. 3

(c) Write down the importance of data dictionary in the context of good software design. 2

UNIT—V

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

(b) Distinguish between integration testing and system testing.   3

10. *(a)* What is debugging? Distinguish between fault and failure.   2+1+1=4

(b) Explain the terms 'software reliability' and 'software quality management'.
   1½+1½=3

★ ★ ★