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(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 software engineering? Explain briefly the types of systems.   1+3=4

   (b) What is system development life cycle? Explain in brief the different phases of system development life cycle.   ½+3=3½

2. *(a)* Elaborate on the technical skills and communication skills required for a systems analyst.   3½

   (b) Describe the two techniques for gathering information.   4

UNIT—II

3. Explain how the spiral model helps to reduce risk in the software development process. 6½

4. (a) Explain the evolutionary model with a diagram. Discuss the benefits and drawbacks. 3½

   (b) What factors should you consider while selecting a model for your software? 3

UNIT—III

5. (a) Discuss different categories of coupling. 6

   (b) What factors affect the system complexity? 2½

6. (a) What actually is an SRS document? What are the characteristics of an effective SRS document? 1+3=4

   (b) How do you represent complicated logic during the analysis phase? Discuss one method of your choice. 1+3½=4½

UNIT—IV

7. (a) Write a short note on structured analysis. 2½

   (b) What do you understand by (i) factoring of a bubble in DFD and (ii) balancing a DFD? 2½+2½=5

8. (a) Write a short note on interface design guidelines. 3

   (b) Using a diagram, explain the unified modelling language in brief. 3

   (c) Differentiate between mode-based and modeless interface. 1½

UNIT—V

9. (a) Differentiate between verification and validation. 3

   (b) Describe the differences between white box and black box testing. 4

10. (a) What are the various kinds of software maintenance methods? 2

    (b) Why is it necessary to test and maintain software? Justify your response. 3

    (c) What do you mean by software reverse engineering? What is its purpose? 2

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