TDC (CBCS) Even Semester Exam., 2024

COMPUTER SCIENCE

(6th Semester)

Course No. : CSCHCC-602T

(Software Engineering)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

UNIT—I

1. Answer any *two* of the following questions : 2×2=4

(a) What is the prime objective of software engineering?

(b) Define software process framework.

(c) List the process maturity levels in SEI's CMM.

2. Answer any *one* of the following questions : 10

(a) Explain and describe umbrella activities in software engineering process.

(b) Explain iterative waterfall and spiral model for software life cycle.

UNIT—II

3. Answer any *two* of the following questions : 2×2=4

(a) Mention any two non-functional requirements on software to be developed.

(b) What is known as SRS review? How is it conducted?

(c) Write the uses of PERT chart.

4. Answer any *one* of the following questions : 10

(a) Describe how software requirements are documented. State the importance of document. 5+5=10

(b) *(i)* List out the importance of estimation in software development.

(ii) Discuss in brief the COCOMO model. 2+8=10

UNIT—III

5. Answer any *two* of the following questions : 2×2=4

(a) Write down the main classifications of risks which can affect a software project.

(b) Write down the activities of software quality management.

(c) What is the purpose of RMMM? How does risk monitoring contribute to software risk management?

6. Answer any *one* of the following questions : 10

(a) *(i)* Explain the activities of risk management to develop a software.

(ii) Discuss in brief the methods for identifying risks. 5+5=10

(b) *(i)* Discuss in brief the evolution of quality management system. 5

(ii) What is software metric? Explain the classification of software metric. 1+4=5

UNIT—IV

7. Answer any *two* of the following questions : 2×2=4

(a) Distinguish between a data flow-diagram (DFD) and a flowchart.

(b) Why is software architecture important in a software process?

(c) What are the major components of DFD?

8. Answer any *one* of the following questions : 10

(a) Explain the set of principles for software engineering design.

(b) With an example explain the levels in DFD.

UNIT—V

9. Answer any *two* of the following questions : 2×2=4

(a) Distinguish between verification and validation.

(b) What are the roles of testing tools?

(c) Distinguish between alpha and beta testing.

10. Answer any *one* of the following questions : 10

(a) Discuss in brief the differences between black-box and white-box testing models. Discuss how these testing models may be used to test together to test a program.

(b) Explain the integration testing process and system testing process and discuss their outcomes.

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