CBCS SCHEME

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15CS42

Fourth Semester B.E. Degree Examination, Jan./Feb. 2023
Software Engineering

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What are the attributes of good software? List and explain the key challenges facing Software Engineering. **(06 Marks)**

b. With neat diagram explain water fall model. **(06 Marks)**

c. Explain the fundamental activities of software engineering. **(04 Marks)**

OR

2 a. Explain IEEE standard format for requirement documentation. **(06 Marks)**

b. Explain Boehm's spiral model with neat diagram. **(06 Marks)**

c. Write note on requirement change management. **(04 Marks)**

Module-2

3 a. Define Interaction model. Explain with sequence diagram for patient information. **(08 Marks)**

b. Explain the state machine model of microwave oven with neat diagram. **(08 Marks)**

OR

4 a. What is Software reuse? Explain the different level of software reuse. **(06 Marks)**

b. What is system context model? Explain with neat block diagram of system context for the weather station. **(06 Marks)**

c. Explain with suitable example:
i) Aggregation
ii) Generalization **(04 Marks)**

Module-3

5 a. What are the guidelines for Interface testing? **(04 Marks)**

b. Define Test driven development. Explain the steps of Test driven development process with diagram. **(06 Marks)**

c. What are different types of user testing? Explain Acceptance testing process with neat diagram. **(06 Marks)**

OR

6 a. Explain Lehman's laws. **(05 Marks)**

b. With neat diagram describe the system evaluation process. **(05 Marks)**

c. Explain activities involved in reengineering process with figure. **(06 Marks)**

Module-4

7 a. Explain with neat diagram of the project scheduling process. **(05 Marks)**

b. Refer the following table, draw an activity chart showing the project schedule.

Task	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8	T_9	T_{10}	T_{11}	T_{12}
Duration Days	10	15	15	10	10	5	20	25	15	15	10	10
Dependencies			T_1 (M_1)		T_2, T_4 (M_3)	T_1, T_2 (M_4)	T_1 (M_1)	T_4 (M_2)	T_3, T_6 (M_5)	T_7, T_8 (M_6)	T_9 (M_7)	T_{10}, T_{11} (M_8)

(06 Marks)

c. Explain the factor affecting software pricing. **(05 Marks)**

OR

8 a. With neat diagram, explain review process. **(06 Marks)**

b. Explain the key stages in component measurement process with neat diagram. **(06 Marks)**

c. Explain the process based product quality. **(04 Marks)**

Module-5

9 a. What are agile methods? Discuss the principles of agile method. **(06 Marks)**

b. Summarize the practices involved in the extreme programming. **(06 Marks)**

c. Explain with neat diagram of scrum management process. **(04 Marks)**

OR

10 a. Differentiate large software with small software system development. **(06 Marks)**

b. Write note on pair programming. **(05 Marks)**

c. Show the distinctions between plan-driven and agile specification and development. **(05 Marks)**

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