CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐ **15CS42**

Fourth Semester B.E. Degree Examination, Feb./Mar. 2022
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 is Software Engineering? What are the fundamental Software Engineering activities? **(05 Marks)**
   b. Explain the requirements engineering process with neat block diagram. **(05 Marks)**
   c. List the requirements discovery techniques and explain usecases for the (MHC-PMS) Mental Health Care Patient Monitoring System. **(06 Marks)**

OR

2 a. Explain the ways of writing system requirement specification. **(05 Marks)**
   b. Explain requirement elicitation and analysis process. **(06 Marks)**
   c. Write a short note on requirements management planning. **(05 Marks)**

Module-2

3 a. Explain use case modeling with example. **(05 Marks)**
   b. Draw the sequence diagram for view patient information. **(05 Marks)**
   c. Explain class diagrams. Give classes and associations in MHC-PMS. **(06 Marks)**

OR

4 a. Explain dynamic models and give the weather station state diagram. **(06 Marks)**
   b. What is a design pattern? Explain four elements of design patterns. **(06 Marks)**
   c. Write a note on software reuse. **(04 Marks)**

Module-3

5 a. State advantages of software inspection over testing. **(04 Marks)**
   b. Explain release testing process of testing in detail. **(07 Marks)**
   c. Write a short note on user testing. **(05 Marks)**

OR

6 a. State and explain different types of software maintenance. **(03 Marks)**
   b. Explain most appropriate strategy for evolving legacy systems. **(08 Marks)**
   c. With neat diagram, explain Rajlich and Bennett's alternate view of software evolution. **(05 Marks)**

Module-4

7   a. Briefly explain plan driven development approach to software engineering.   (08 Marks)
    b. Draw a bar chart showing the project schedule for tasks, durations and their dependencies shown in below table.

Task	Duration (days)	Dependencies
T_1	10	
T_2	15	
T_3	15	T_1 (M1)
T_4	10	
T_5	10	T_2, T_4 (M3)
T_6	5	T_1, T_2 (M4)
T_7	20	T_1 (M1)
T_8	25	T_4 (M2)
T_9	15	T_3, T_6 (M5)
T_{10}	15	T_7, T_9 (M6)
T_{11}	10	T_9 (M7)
T_{12}	10	T_{10}, T_{11} (M8)

(08 Marks)

OR

8   a. Explain the software quality review process.   (08 Marks)
    b. Give reasons why software standards are important. Explain product and process standards.   (08 Marks)

Module-5

9   a. List and explain principles of agile methods.   (06 Marks)
    b. Explain extreme programming and practices.   (10 Marks)

OR

10 a. Explain SCRUM. Draw and explain block diagram for SCRUM process.   (10 Marks)
    b. Write a short note on pair programming.   (06 Marks)

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