

CBCS SCHEME

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20MCA24

Second Semester MCA Degree Examination, July/August 2022 Software Engineering

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Define Software Engineering. Elaborate upon the essential attributes of a good software. (10 Marks)
- b. Illustrate how software engineering concept is applied using the case study of an insulin pump control system. (10 Marks)

OR

- 2 a. Describe the waterfall model with a neat diagram with its merits and demerits. (10 Marks)
- b. Explain the principles of agile methods and the extreme programming practices. (10 Marks)

Module-2

- 3 a. What is requirement engineering? Explain the functional and non-functional requirements. (10 Marks)
- b. Explain requirements discovery in detail. (10 Marks)

OR

- 4 a. What is SRS document? Explain the structure of SRS document. Also discuss about the users of a requirements document. (10 Marks)
- b. Explain requirements validation and also the techniques used for requirements validation. (10 Marks)

Module-3

- 5 a. What is object orientation? Explain the themes of object oriented methodology. (10 Marks)
- b. Describe the steps to be followed in Object Oriented development. (10 Marks)

OR

- 6 a. What are links and associations? Write and explain UML notations for links and association with example. (10 Marks)
- b. Discuss generalizations, specialization and inheritance concepts. (10 Marks)

Module-4

- 7 a. What are events and states? With necessary examples explain the different types of events. (10 Marks)
- b. Draw a nested state diagram for telephone line system. Write transitions with reference to the state diagram behavior. (10 Marks)

OR

- 8 a. What is use case model? Write and explain the use case diagram for a vending machine. Write the guidelines for use case model. (10 Marks)
- b. Explain the sequence model for the online stock broker system with a neat diagram. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-5

- 9 a. Describe the two commonly used approaches for effort estimation. (10 Marks)
b. Discuss in detail about the concept of Risk Management. (10 Marks)

OR

- 10 a. Explain the Project Scheduling Process. (10 Marks)
b. Explain Configuration Management Planning. (10 Marks)
