

CBCS SCHEME

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Third Semester B.E. Degree Examination, Jan./Feb. 2023 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. Identify and explain principal stages of spiral model with a neat diagram. Mention its advantages and disadvantages. (10 Marks)
- b. Identify IEEE principle of code of ethics in software engineering. (05 Marks)
- c. Organize and explain structure of software requirement document. (05 Marks)

OR

- 2 a. Identify and explain functional and non-functional requirements in software engineering. (10 Marks)
- b. Build and explain Insulin pump control system with a neat diagram. (10 Marks)

Module-2

- 3 a. What is object orientation and object oriented development? Identify and explain 3 models with an example for each. (10 Marks)
- b. Identify and explain object oriented themes in detail with an example for each. (10 Marks)

OR

- 4 a. Making use of object oriented concepts explain link and association, with an example for each. (10 Marks)
- b. Apply generalization and inheritance in object oriented development, explain each with an example. (10 Marks)

Module-3

- 5 a. What is system modeling? Identify and list different types of system models. Explain any 2 system models with a neat diagram. (10 Marks)
- b. Build and explain a sequence model to show the operations of mental health care patient monitoring system. (10 Marks)

OR

- 6 a. Explain Rational Unified Process. Identify and describe the phases of RUP with a neat diagram and mention its importance in software engineering. (08 Marks)
- b. Identify and explain basic 5 phases of object oriented design using UML. (07 Marks)
- c. Identify and explain the features of open source development and licensing. (05 Marks)

Module-4

- 7 a. What is development testing? Explain test driven development in software engineering, with a neat diagram. (10 Marks)
- b. Identify and explain six stages of acceptance testing process with a neat diagram and an example. (10 Marks)

OR

- 8 a. What is software evolution? Explain with a neat diagram. Mention different types of software maintenance and explain. (08 Marks)
- b. With "Program Evolution Dynamics", identify and explain Lehman's law in software engineering process. (08 Marks)
- c. Identify and list strategic options for legacy system management. (04 Marks)

Module-5

- 9 a. What is software pricing? Examine the factors affecting software process in software pricing. (06 Marks)
- b. What are estimation techniques? List and explain COCOMO II model with a neat diagram. (08 Marks)
- c. Explain Plan driven development with project plans and planning process with a neat diagram. (06 Marks)

OR

- 10 a. Identify and explain software quality attributes, software standards and its types in detail. (08 Marks)
- b. Identify and explain Inspection checklist in software engineering reviews and inspections. (06 Marks)
- c. Identify and explain Software Product metrics with software component analysis. (06 Marks)
