

CBCS SCHEME

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Fourth Semester B.E. Degree Examination, Jan./Feb. 2021

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. Define software engineering. Explain the different types of software product. (06 Marks)
- b. Explain the waterfall software process model. (06 Marks)
- c. With a neat diagram, explain the types of non-functional requirement. (04 Marks)

OR

- 2 a. Explain the essential attributes of good software. (06 Marks)
- b. Explain software controlled Insulin pump with neat diagram. (06 Marks)
- c. Explain the requirements elicitation and analysis process. (04 Marks)

Module-2

- 3 a. Explain the context model of Mental Health Care Patient Management System (MHC-PMS). (06 Marks)
- b. With neat diagram, explain phases of Rational Unified Process (RUP) and also list best practices of RUP. (06 Marks)
- c. Explain the different levels of reuse in implementation issues. (04 Marks)

OR

- 4 a. Explain the classes and associations in structural models with reference to MHC-PMS. (06 Marks)
- b. Define pattern. Explain the four essential elements of design pattern. (06 Marks)
- c. Explain open source licensing models. (04 Marks)

Module-3

- 5 a. Explain two distinct goals of software testing and also explain a model of software testing process. (08 Marks)
- b. Discuss the Lehman's laws for program evolution dynamics. (08 Marks)

OR

- 6 a. Explain various types of interface errors and also discuss three classes of interface errors. (08 Marks)
- b. Explain three different types of software maintenance. Why it is more expensive to add functionality after a system is in operation than its development? (08 Marks)

Module-4

- 7 a. Define Milestones and Deliverables. Explain the project scheduling process with neat diagram. (08 Marks)
- b. With a neat diagram, explain the review process in software quality management. (08 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.



- 8 a. Explain factors affecting software pricing. List the different types of project plan supplements. (08 Marks)
- b. With a neat diagram, explain ISO 9001 core process for quality management. (08 Marks)

OR

- 9 a. With a neat diagram explain the system evolution. (08 Marks)
- b. Discuss various principles used in Agile method and also explain why it is difficult to realize Agile method principles. (08 Marks)

OR

- 10 a. Define SCRUM and also explain its principles along with its advantages and disadvantages. (08 Marks)
- b. With a neat diagram, explain plan-driven and agile approaches to system specification. (08 Marks)
