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18CS35

Third Semester B.E. 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. What is software engineering and why it is important? Explain software engineering ethics. (10 Marks)
- b. With a neat block diagram, explain the requirement elicitation and analysis process. (06 Marks)
- c. What is requirement validation? Explain the different types of checks carried out during the process. (04 Marks)

OR

- 2 a. What do you mean by software design and implementation? With neat block diagram, explain the general model of the design process. (10 Marks)
- b. Write note on the following:
 - (i) Non-functional requirements with example.
 - (ii) Notations used for writing system requirements. (10 Marks)

Module-2

- 3 a. What a Object Oriented Development? Explain the different stages of object oriented development. (10 Marks)
- b. Write note on the following:
 - (i) Association End Names.
 - (ii) Purposes of Model. (10 Marks)

OR

- 4 a. Write note on :
 - (i) OO Themes
 - (ii) The Three models. (10 Marks)
- b. Describe the various OCL (Object Constraint Language) constructs for traversing class models with example. (10 Marks)

Module-3

- 5 a. Describe Event-driven model with a state diagram of microwave oven application. (10 Marks)
- b. What do you mean by design pattern? Explain the essential elements of design pattern. (10 Marks)

OR

- 6 a. Describe the three main aspects of implementation important to software engineering. (10 Marks)
- b. Describe interaction models with example. (10 Marks)

Module-4

- 7 a. Describe the three different types of user testing. (10 Marks)
- b. Explain software reengineering process with a neat block diagram. (10 Marks)

OR

- 8 a. Describe the Lehman's laws of program evolution dynamics. (10 Marks)
b. Discuss the following with respect to Legacy system management :
(i) Strategic options
(ii) Clusters of system. (10 Marks)

Module-5

- 9 a. Describe the following with respect to project plan development :
(i) Sections of project plan. (10 Marks)
(ii) Project scheduling. (10 Marks)
b. Discuss the software review process and inspections of quality assurance. (10 Marks)

OR

- 10 a. Describe the key stages in the process of product measurement. Also briefly explain the factors affecting software pricing. (10 Marks)
b. Write note on the following.
(i) Static software product metrics.
(ii) Algorithmic cost modeling. (10 Marks)
