10IS51

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
Software Engineering

Time: 3 hrs.

Max. Marks:100

Note: *Answer any FIVE full questions, selecting at least TWO full questions from each part.*

PART – A

1 a. Define Software Engineering. Explain the different types of software products. (06 Marks)
   b. What are the attributes of a good software? (04 Marks)
   c. Explain the system engineering process activities, with a neat block diagram. (10 Marks)

2 a. What are the types of critical systems? Draw a simple safety critical system and explain. (10 Marks)
   b. Explain the process iteration with diagrams. (10 Marks)

3 a. Explain the metrics for specifying non-functional requirements. (06 Marks)
   b. Write the IEEE format of writing Software Requirement Specification (SRS). (04 Marks)
   c. What is Ethnography? How ethnography is effective in discovering the types of requirements? Explain. (10 Marks)

4 a. Draw the state machine model of a microwave oven. (05 Marks)
   b. Explain structured methods. (05 Marks)
   c. What are the project management activities? Explain. (10 Marks)

PART – B

5 a. With an example describe the repository model and give its advantages and disadvantages. (10 Marks)
   b. What is a sequence model? Draw the sequence model of operations in collecting the data from a weather station and explain. (10 Marks)

6 a. Explain extreme programming. (10 Marks)
   b. With a block diagram, explain the system evolution process. (10 Marks)

7 a. Explain clean-room software development. (08 Marks)
   b. Briefly explain the roles in inspection process. (04 Marks)
   c. Explain any one of the approaches to test case design. (08 Marks)

8 a. Why People Capability Maturity Model is used? Explain. (10 Marks)
   b. List and explain cost estimation techniques. (10 Marks)

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