USN

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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