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Fifth Semester B.E. Degree Examination, Dec.2018/Jan.2019

Software Engineering

Time: 3 hrs. Max. Marks:100

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

PART – A

1 a. What is software? Explain the essential attributes of a good software. **(05 Marks)**
b. List and explain the key challenges facing software engineering. **(05 Marks)**
c. Explain the different phases of the system engineering process with a neat diagram. **(10 Marks)**

2 a. Explain the four principle dimensions of dependability. **(04 Marks)**
b. Illustrate with a figure, the mapping of a software system from input to output. **(04 Marks)**
c. Explain with a figure, the following process models:
i) Water fall model
ii) Evolutionary development **(12 Marks)**

3 a. What are the different metrics for specifying the non-functional requirements? Explain any two of them. **(06 Marks)**
b. Explain with a figure, the requirement elicitation and analysis process. **(08 Marks)**
c. List and explain the different types of checks that should be carried out on requirements in a requirement document. **(06 Marks)**

4 a. Draw the data flow diagram for order processing and explain the different process activities involved in it. **(10 Marks)**
b. List and explain the different activities involved in software project management. **(10 Marks)**

PART – B

5 a. Explain with a figure, the shared repository model and give its advantages and disadvantages. **(10 Marks)**
b. Explain the different stages involved in object oriented design process. **(05 Marks)**
c. With a neat figure, explain the different layers in the weather station software. **(05 Marks)**

6 a. What is a pair programming? List its advantages. **(05 Marks)**
b. Explain with a diagram, the process of prototype development. **(08 Marks)**
c. Explain the different factors used in application assessment. **(07 Marks)**

7 a. What are advantages of inspection over testing? **(04 Marks)**
b. Explain with a figure, the clean room software development process. **(08 Marks)**
c. Explain with example:
i) Block-Box testing
ii) Path testing **(08 Marks)**

8 a. List and explain the factors governing staff selection. **(10 Marks)**
b. Explain in detail algorithmic cost models in project planning. **(10 Marks)**

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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.

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