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10IS51

Fifth Semester B.E. Degree Examination, Aug./Sept.2020

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 engineering? What are the key challenges that a software engineering is facing? **(05 Marks)**
b. With a block diagram, explain the different phases of systems engineering process. **(10 Marks)**
c. Explain why legacy systems may be critical to the operation of a business. **(05 Marks)**

2 a. What are critical systems? List and explain different types of critical systems. **(06 Marks)**
b. Explain Boehm's spiral model of the software process with a neat diagram. **(08 Marks)**
c. Describe different phases in the Rational United Process. **(06 Marks)**

3 a. What are non-functional requirements? How are they different from functional requirements? Give examples. **(06 Marks)**
b. Explain the structure of requirements document. **(06 Marks)**
c. With a neat diagram, explain the requirement engineering process in detail. **(08 Marks)**

4 a. Define data-flow model. Give data flow diagram for an Insulin pump. **(06 Marks)**
b. State and explain different management activities. **(08 Marks)**
c. Explain risk management process with a neat diagram. **(06 Marks)**

PART – B

5 a. What are the advantages and disadvantages of object oriented design? **(06 Marks)**
b. Explain client-server model with example. **(08 Marks)**
c. Write a note on control styles. **(06 Marks)**

6 a. Give a brief description of principles of agile methods. **(06 Marks)**
b. With a neat diagram, explain the system evolution process. **(08 Marks)**
c. Explain the activities of re-engineering process. **(06 Marks)**

7 a. Explain the structures of a software test plan. **(06 Marks)**
b. With a neat figure, explain the clean room software development process. **(08 Marks)**
c. Explain the goals of software testing process. **(06 Marks)**

8 a. Briefly explain the factors that may influence the decision of selecting staff for the project team. **(07 Marks)**
b. Explain the factors affecting software pricing. **(07 Marks)**
c. Write a note on people capability maturity model **(06 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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