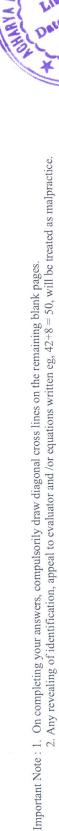
(06 Marks)





## 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 eng      | ineering is    |
|   |    | facing?  | (05 Marks)     |
|   | b. | With a block diagram, explain the different phases of systems engineering process  | 3.(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)     |
|   |    |  | 2              |
| 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)     |
|   |    |  | (0.53.5.3)     |
| 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)     |
| 3 | b. | Explain client-server model with example.  | (08 Marks)     |
|   | c. | Write a note on control styles.  | (06 Marks)     |
|   | ٥. | write a note on control styles.  | (00 1/14/14/3) |
| 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)     |
|   | с. | 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 |                |
|   |    | team.  | (07 Marks)     |
|   | b. | Explain the factors affecting software pricing.                                    | (07 Marks)     |

c. Write a note on people capability maturity model