16/17MCA34

Third Semester MCA Degree Examination, Jan./Feb. 2021
Software Engineering

Time: 3 hrs.   Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What is Software? Discuss the attributes of a good software. (06 Marks)
   b. Explain IEEE/ACM code of software engineering ethics. (10 Marks)

OR

2 a. Define Software Process model. Mention different process models. (04 Marks)
   b. Explain Reuse-oriented software engineering with neat diagram. (08 Marks)
   c. Explain the principles underlying agile methods. (04 Marks)

Module-2

3 a. What are requirements for a system? Explain non-functional requirements with a neat diagram. (08 Marks)
   b. With a neat diagram explain spiral view of the requirement engineering process. (08 Marks)

OR

4 a. Define components, hence explain the essentials of components-based software engineering. (06 Marks)
   b. What is component composition? Explain types of component composition with diagram. (10 Marks)

Module-3

5 a. Explain Interaction models with its approaches. (10 Marks)
   b. What is event-driven modeling? Draw state diagram of a microwave oven. (06 Marks)

OR

6 a. Explain the architecture views briefly. (04 Marks)
   b. Explain the architecture styles for C&C view. (12 Marks)

Module-4

7 a. Explain the design concepts. (12 Marks)
   b. Briefly explain four major steps of Structured Design Methodology. (04 Marks)

OR

8 a. Define distributed system. Explain the advantages of using a distributed approach to system development. (06 Marks)
   b. Write short notes on :
      (i) SaaS [Software as a Service]
      (ii) Master-Slave architectures. (10 Marks)

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Module-5

9 a. Define risk management. Hence explain stages with neat diagram. **(10 Marks)**
   b. Briefly explain project scheduling process with diagram. **(06 Marks)**

OR

10 a. Define the below terms :
   (i) Error   (ii) Fault   (iii) Failure
   (iv) Test case   (v) Test Suite   (vi) Test Harness **(06 Marks)**
   b. Explain Testing process. **(10 Marks)**

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