MCA31

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SEMESTER END EXAMINATIONS – FEBRUARY / MARCH 2024

Program	: **Master of Computer Applications**	**Semester**	:	**III**
Course Name	: **Software Engineering and Agile Methodologies**	**Max. Marks**	:	**100**
Course Code	: **MCA31**	**Duration**	:	**3 Hrs**

Instructions to the Candidates:
- Answer one full question from each unit.

UNIT - I

1. a) Highlight the key activities involved in the requirements specification process. CO2 (06)
   b) With a neat diagram, discuss the software requirement engineering process. CO2 (08)
   c) Discuss key challenges faced by Software Engineering. CO1 (06)

2. a) Discuss the metrics defined for non-functional requirement. CO2 (06)
   b) With a neat diagram, discuss fundamental activities in software development process. CO2 (08)
   c) List and discuss the key factors which influence socio-technical system operation. CO1 (06)

UNIT - II

3. a) Define software architecture and draw the sequence diagram for withdraw of money in an ATM machine. CO2 (10)
   b) Write a short note on: CO2 (10)
      i. Behavioral models.
      ii. Data-driven modeling.

4. a) Illustrate Model Driven Engineering with an example. CO2 (10)
   b) Discuss the Model – View – Controller Model with suitable example and appropriate diagrams. CO2 (10)

UNIT - III

5. a) What is Agile? And state the Agile Manifesto. CO3 (06)
   b) State and explain the benefits of Agile. CO3 (10)
   c) How can you find a mentor for your Agile Development team? Discuss. CO3 (04)

6. a) Illustrate the agile principles with appropriate examples. CO3 (15)
   b) List the different agile methods with examples. CO3 (05)

UNIT- IV

7. a) List and explain the different symptoms of a poor design in software.   CO4   (10)
    b) Describe the different principles of Agile Design.   CO4   (10)

8. a) Describe extreme programming practices with appropriate examples   CO4   (10)
    b) What is Agile design? How did the Agile developers know what to do? How to keep the design as good as possible? Justify your answer.   CO4   (10)

UNIT - V

9. a) Illustrate the Kanban Process with help of a neat diagram.   CO5   (06)
    b) Discuss the principles of Kanban process.   CO5   (06)
    c) Describe the dynamic system development method in brief.   CO5   (08)

10. a) Illustrate how agile testing team is different from traditional testing team.   CO5   (06)
    b) Discuss the four steps required in acceptance test driven development?   CO5   (06)
    c) Find the difference between TDD and acceptance test driven development?   CO5   (08)

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