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## End Semester Examination 2024

Name of the Course: MCA

Semester: IV

Name of the Paper : Advanced  
Software Testing

Paper Code: TMC403(3)

Time: 3 Hours

Maximum Marks: 100

**Note:**

- (i) All Questions are compulsory.
- (ii) Answer any two sub questions among a,b and c in each main question.
- (iii) Total marks in each main question are twenty.
- (iv) Each question carries 10 marks.

<b>Q1</b>	(10*2=20 marks)	
(a)	With a neat diagram explain software testing life cycle. What are the various difficulties and limitations of software testing?	<b>CO1</b>
(b)	What are the various difficulties faced by a tester in the process of software testing?	
(c)	What is V shaped software life cycle model? Elaborate the term software testing with example?	
<b>Q2</b>	(10*2=20 marks)	
(a)	What the limitations of testing? Explain any 5 reason of software failure.	<b>CO2</b>
(b)	Focus on the need of user document verification. Explain the various types of testing documents.	
(c)	Discuss the importance of structural testing. With a neat diagram explain generation of a control flow graph.	
<b>Q3</b>	(10*2=20 marks)	
(a)	Differentiate between functional testing and equivalence class testing.	<b>CO3</b>
(b)	Discuss the importance of structural testing with its advantages and disadvantages.	
(c)	Elaborate the following: (i) DD-Paths (ii) Cyclomatic Complexity (iii) Slice Based Testing	
<b>Q4</b>	(10*2=20 marks)	
(a)	List and discuss issues in Object Oriented Testing. Explain path testing, class testing, state based testing.	<b>CO4</b>
(b)	Explain component level testing. What is the objective of performing this testing? What are the phases of component level testing?	
(c)	Why regression is used in software project development. Explain following in relation to regression testing: (i) Selection (ii) Minimization (iii) Prioritization of test cases	
<b>Q5</b>	(10*2=20 marks)	
(a)	Discuss metrics and models in Software Testing.	<b>CO5</b>
(b)	Write an essay on software quality attributes.	
(c)	Discuss some techniques for prioritization of test cases.	