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Time: 2 Hours

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA (An Autonomous Institute Affiliated to AKTU, Lucknow) MCA

SEM: IV - THEORY EXAMINATION (2023 - 2024)

Subject: Software Quality and Testing

1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

- 3. Illustrate your answers with neat sketches wherever necessary.
- 4. Assume suitable data if necessary.
- 5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION /

1. Attempt all parts:-

What is the most crucial factor to consider when analyzing test coverage? 1-a. 1 (CO1)

(a) The total number of test cases executed

- (b) The percentage of code covered by test cases
- (c) The criticality and risk of untested areas
- (d) The time spent on each test case
- 1-b. In risk-based testing, what should be the primary focus of testing efforts? 1 (CO2)
 - (a) Testing every possible scenario
 - (b) Testing according to a predefined test plan
 - (c) Testing the areas with the highest identified risks
 - (d) Testing only the most critical functionalities
- What type of review is focused on evaluating the overall status of a project. 1-c. 1

Max. Marks: 50

15

Subject Code:- AMCA0418

Roll. No:

(CO3)

- (a) Technical Review
- (b) Management Review
- (c) Code Review
- (d) Walkthrough
- 1-d. Which defect state indicates the defect has been fixed and is ready for the 1 tester to verify. (CO4)
 - (a) New
 - (b) Open
 - (c) Resolved
 - (d) Closed
- 1-e. What is the purpose of a Continuous Integration (CI) tool in software 1 development. (CO5)
 - (a) To manage project tasks and defects.
 - (b) To automate the process of integrating code changes into a shared repository.
 - (c) To analyze code for potential defects or vulnerabilities.
 - (d) To facilitate collaboration among team members.

2. Attempt all parts:-

	SECTION B	15
2.e.	Define different Performance Testing Tools. (CO5)	2
2.d.	Define Development in SDLC. (CO4)	2
2.c.	Define Requirement Reviews. (CO3)	2
2.b.	Explain different Activities done by stakeholder. (CO2)	2
2.a.	Describe the responsibilities of Test Lead. (CO1)	2

3. Answer any three of the following:-

(CO4)

3-a.	Explain types of Test Closure Activities. (CO1)	5
3-b.	Describe Key Steps in Project Risk Management. (CO2)	5
3.c.	Explain the following: (i)Code Reviews (ii) Design Reviews (iii)Requirement Reviews. (CO3)	5
3.d.	Explain the following: (i) Requirement Analysis (ii)Planning (iii)Feasibility Study	5

3.e.	Explain the following:(i) Performance Testing Tools(ii)Security Testing in testing		
	Tools. (CO5)		
	SECTION C 20		
4. Answ	er any <u>one</u> of the following:-		
4-a.	Explain Equivalence Class Testing with Example. (CO1)	4	
4-b.	Explain Pairwise Testing with Example. (CO1)	4	
5. Answ	er any <u>one</u> of the following:-		
5-a.	Describe Machine Learning Techniques. (CO2)	4	
5-b.	Describe Coverage-Based Prioritization. (CO2)	4	
6. Answ	er any <u>one</u> of the following:-		
6-a.	Differentiate between Requirement Reviews and Design Reviews. (CO3)	4	
6-b.	Differentiate between General Review Metrics and Code Review Metrics. (CO3)	4	
7. Answ	er any <u>one</u> of the following:-		
7-a.	Describe Defect States with proper Example. (CO4)	4	
7-b.	Describe Strategies for Management. (CO4)	4	
8. Answ	er any <u>one</u> of the following:-		
8-a.	Describe different Key Categories of Tool Metrics. (CO5)	4	
8-b.	Explain different functional testing tools. (CO5)	4	
	RFG.		