Printed Page:- Subject Code:- BMCA0214

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA

SEM: II - THEORY EXAMINATION (20... - 20...)

Subject: Software Testing

Time: 3 Hours Max. Marks: 100

General Instructions:

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

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-A 20

1. Attempt all parts:-

1-a. A set of activities that ensure that software correctly implements a specific function.(CO1,K1) 1

(a) verification
(b) testing
(c) implementation
(d) validation

1-b. _____ leads to failure.(CO1,K1) 1

(a) defects
(b) bugs
(c) faults
(d) All of the above

1-c. Unit testing is done by_____.(CO2,K1) 1

(a) User
(b) Developer
(c) Tester
(d) None of the above

1-d. In the context of SDLC models ,Sprint is a _____.(CO2,K1) 1

(a) A phase in the Waterfall Model
(b) A component of the Spiral Model

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(c) System testing
(d) A milestone in the V Model

1-e. During review meeting, defects are logged by _____.(CO3,K1) 1

(a) Author
(b) Moderator
(c) Both Author and Scribe
(d) Scribe

1-f. In dynamic testing, the purpose of executing test cases is _____.(CO3,K1) 1

(a) To verify that the software functions correctly
(b) To review the code for adherence to standards
(c) To analyze the software without running it
(d) To check the software documentation

1-g. _____ is not a type of Black Box Testing.(CO4,K1) 1

(a) Statement coverage
(b) Decision table testing
(c) Boundary value analysis
(d) State transition testing

1-h. Exhaustive testing is _____.(CO4,K1) 1

(a) always possible
(b) practically possible
(c) impractical but possible
(d) impractical and impossible

1-i. Risk-based testing is primarily focused on:(CO5,K1) 1

(a) Testing high-risk areas first
(b) Executing test cases based on priority
(c) Maximizing test coverage
(d) Documenting defects

1-j. Test case management involves _____.(CO5,K1) 1

(a) Allocating resources for testing
(b) Defining test objectives
(c) Creating and organizing test cases
(d) Analyzing test results

2. Attempt all parts:-

2.a. Explain pesticide paradox in software testing.(CO1,K2) 2

2.b. Mention different phases in Waterfall Model with diagram.(CO2,K2) 2

2.c. Define the term Walkthrough.(CO3,K1) 2

2.d. Define Boundary value analysis in black box testing.(CO4,K1) 2

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2.e.	List out the disadvantages of independent Testing.(CO5,K1)	2

SECTION-B 30

3. Answer any five of the following:-

3-a.	Differentiate between testing and debugging with suitable examples.(CO1,K4)	6
3-b.	Discuss the concepts of errors, defects, and failures in software systems with example.(CO1,K2)	6
3-c.	Illustrate Water fall Model. Explain the problems that are sometimes encountered when the waterfall model is applied?(CO2,K2)	6
3-d.	Discuss the different approaches for integration testing.(CO2,K2)	6
3.e.	Differentiate between Static testing and Dynamic Testing.(CO3,K4)	6
3.f.	Explain Checklist-based testing in detail.(CO4,K2)	6
3.g.	Discuss the term Project Metrices in detail.(CO5,K2)	6

SECTION-C 50

4. Answer any one of the following:-

4-a.	Discuss the importance of traceability in software testing and how a traceability matrix is used to achieve it. Why is it important to maintain traceability between test basis and test work products?(CO1,K2)	10
4-b.	Discuss the psychology of testing. How do the tester's and developer's mindsets differ, and why is this difference important?(CO1,K2)	10

5. Answer any one of the following:-

5-a.	Define the following:(CO2,K1) (i) Regression testing (ii) Efficiency Testing (iii) Recovery testing.	10
5-b.	Differentiate between Prototype Model and Agile Model with clear diagram.(CO2,K4)	10

6. Answer any one of the following:-

6-a.	Compare and contrast static testing and dynamic testing.(CO3,K4)	10
6-b.	Describe the different types of reviews in static testing in detail.(CO3,K1)	10

7. Answer any one of the following:-

7-a.	Differentiate between black box and white box testing in detail.(CO4,K4)	10
7-b.	Discuss Cause Effect Graph with an example.(CO4,K2)	10

8. Answer any one of the following:-

8-a.	Define the following:(CO5,K2) (i)Test Manager (ii)Test Effort (iii)Test Estimation .	10
8-b.	Define configuration management, and explain its components such as version control, change tracking, and baseline management. Describe how it supports testing activities.(CO5,K2)	10

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