

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

MCA

SEM: II - THEORY EXAMINATION (2023 - 2024)

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

10

1. Attempt all parts:-

- 1-a. What does STLC stand for? (CO1) 1
- (a) Software Testing Life Cycle
  - (b) Software Test Logic Cycle
  - (c) Software Testing Lifecycle
  - (d) Software Test Language Cycle
- 1-b. Which of the below is not a part of the Test Plan? (CO1) 1
- (a) Schedule
  - (b) Risk
  - (c) Incident reports
  - (d) Entry and exit criteria
- 1-c. Functional testing is a ----- (CO2) 1
- (a) Test design technique
  - (b) Test level
  - (c) SDLC Model
  - (d) Test type
- 1-d. Which of the following is not part of the Test type? (CO2) 1
- (a) Function testing
  - (b) System testing
  - (c) Statement testing
  - (d) Database testing
- 1-e. Which of the following can be found using static testing techniques? (CO3) 1

- (a) Defect  
 (b) Failure  
 (c) Bug  
 (d) Both Defect and Failure
- 1-f. To check whether coding standards are followed, which type of testing will be beneficial? (CO3) 1  
 (a) Dynamic testing  
 (b) Static testing  
 (c) Parameter testing  
 (d) Computation testing
- 1-g. White Box testing is also known as\_\_\_\_\_ (CO4) 1  
 (a) closed box  
 (b) structural testing  
 (c) Gray box testing  
 (d) None of the mentioned
- 1-h. Transparent Testing is also known as\_\_\_\_\_ (CO4) 1  
 (a) White box testing  
 (b) Black box testing  
 (c) Yellow box testing  
 (d) Green box testing
- 1-i. The purpose of a test closure report is to (CO5) 1  
 (a) Document test execution results  
 (b) Track defects  
 (c) Identify test risks  
 (d) Summarize the testing activities and results
- 1-j. Test prioritization is used to (CO5) 1  
 (a) Determine the number of test cases  
 (b) Identify defects  
 (c) Allocate resources for testing  
 (d) Optimize the order of test execution
2. Attempt all parts:- 10
- 2.a. Define Debugging. (CO1) 2  
 2.b. Discuss the reasons for the Failure of Water Fall Model. (CO2) 2  
 2.c. Define the term Review. (CO3) 2  
 2.d. Define White Box Testing. (CO4) 2  
 2.e. Describe the Benefits of Independent Testing. (CO5) 2

## SECTION B

30

3. Answer any five of the following:-

3-a.	Explain why a developer and tester mindset should be different? (CO1)	6
3-b.	Describe the term Test Reporting. (CO1)	6
3-c.	Define the difference between User Acceptance Testing and System testing. (CO2)	6
3-d.	Define the difference between Alpha testing and beta testing. (CO2)	6
3.e.	Explain Different Individual Review Techniques. (CO3)	6
3.f.	Explain statement and decision testing in detail. (CO4)	6
3.g.	Describe the Various Stages of Defect Management Process. (CO5)	6

50

### SECTION C

**50**

10

4. Answer any one of the following:-

4-a.	Differentiate between testing and debugging. Why are both activities necessary in the software development lifecycle? (CO1)	10
4-b.	Define errors, defects, and failures in the context of software testing. Provide examples of each. (CO1)	10

10

5. Answer any one of the following:-

5-a.	Differentiate between Prototype Model and Waterfall Model. (CO2)	10
5-b.	Define the following: (i) Unit Testing (ii) Integration Testing (iii) System testing (CO2)	10

10

6. Answer any one of the following:-

6-a.	Describe the Success Factors of Reviewers. (CO3)	10
6-b.	Describe the roles and responsibilities of participants in a formal review? (CO3)	10

10

7. Answer any one of the following:-

7-a.	Differentiate state transition Testing and Decision table Testing in detail. (CO4)	10
7-b.	Explain boundary value analysis and why is it important in testing? Illustrate with an example. (CO4)	10

10

8. Answer any one of the following:-

8-a.	Discuss various test estimation techniques and their application in planning test activities. (CO5)	10
8-b.	Explain the concept of independent testing and its advantages and disadvantages. (CO5)	10