

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

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

MCA

SEM: II - THEORY EXAMINATION (2025 - 2026)

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:-

- | | | |
|-------|--|---|
| (1.1) | A major objective of testing includes (CO1, K2) | 1 |
| | (a) Increasing errors
(b) Finding defects
(c) Writing documentation only
(d) Avoiding execution | |
| (1.2) | A failure occurs when (CO1,K2) | 1 |
| | (a) Testing starts
(b) Code is written
(c) Software runs incorrectly
(d) Design is created | |
| (1.3) | Select which of the following is not a valid phase of SDLC (Software Development Life Cycle). [CO2,K1] | 1 |
| | (a) Testing Phase
(b) Requirement Phase
(c) Deployment phase
(d) Testing closure | |
| (1.4) | In which environment we can performed the Alpha testing? [CO2,K1] | 1 |
| | (a) User's end
(b) Developer's end
(c) User's and developer's end
(d) None of the above | |

- (1.5) Static testing mainly focuses on:[CO3,K2] 1
- (a) Execution results
 - (b) Documents and code review
 - (c) User feedback
 - (d) System deployment
- (1.6) A key benefit of static testing is:[CO3,K2] 1
- (a) Increases defects
 - (b) Reduces cost of fixing defects
 - (c) Delays testing
 - (d) Avoids documentation
- (1.7) In Which of the following is not a category of test techniques? [CO4, K1] 1
- (a) Black-box testing
 - (b) White-box testing
 - (c) Experience-based testing
 - (d) Compilation testing
- (1.8) White-box testing focuses on: [CO4, K2] 1
- (a) User interface only
 - (b) Internal structure of software
 - (c) Customer feedback
 - (d) Requirement gathering
- (1.9) Test manager is responsible for:[CO5,K1] 1
- (a) Coding
 - (b) Planning
 - (c) Designing UI
 - (d) Deployment
- (1.10) Test plan is a:[CO5,K1] 1
- (a) Code file
 - (b) Document
 - (c) Tool
 - (d) Script

2. Attempt all parts:-

- (2.1) Explain the need for software testing. (CO1,K2) 2
- (2.2) Define Software Development Life Cycle. [CO2,K2] 2
- (2.3) Explain the concept of dynamic testing in brief. [CO3, K2] 2
- (2.4) Define equivalence partitioning. [CO4, K1] 2
- (2.5) Define test organization in software testing. [CO5, K1] 2

SECTION-B

30

Answer any one of the following:-

- (3.1) Explain the need for testing in real-world software projects. (CO1,K3) 6
- (3.2) Explain Traceability.Analyze the benefits of using a traceability matrix. (CO1, K4) 6

Answer any one of the following:-

- | | | |
|-------|--|---|
| (3.3) | Explain the meaning of entry and exit criteria mean in a project. [CO2,K2] | 6 |
| (3.4) | Define the difference between User Acceptance Testing and System testing. [CO2,K2] | 6 |

Answer any one of the following:-

- | | | |
|-------|--|---|
| (3.5) | Describe the complete work product review process with its steps. [CO3, K2] | 6 |
| (3.6) | Describe the roles and responsibilities involved in a formal review. [CO3, K2] | 6 |

Answer any one of the following:-

- | | | |
|-------|--|---|
| (3.7) | Describe boundary value analysis and its significance in defect detection. [CO4, K2] | 6 |
| (3.8) | Describe state transition testing with a suitable diagram. [CO4, K2] | 6 |

Answer any one of the following:-

- | | | |
|--------|--|---|
| (3.9) | Apply roles of tester and test manager in executing a testing project. [CO5, K3] | 6 |
| (3.10) | Apply monitoring and control techniques to improve testing outcomes. [CO5, K3] | 6 |

SECTION-C 50

4. Answer any one of the following:-

- | | | |
|-------|--|----|
| (4.1) | Write test case on Registration Page.(CO1, K6) | 10 |
| (4.2) | Explain all seven principles of testing, Also Discuss the importance of seven principle of testing in software testing. (CO1,K5) | 10 |

5. Answer any one of the following:-

- | | | |
|-------|--|----|
| (5.1) | Discuss different types of Non-Functional Testing. [CO2,K2] | 10 |
| (5.2) | Define the following: (i) System testing (ii) Acceptance Testing (iii) Functional Testing [CO2,K2] | 10 |

6. Answer any one of the following:-

- | | | |
|-------|---|----|
| (6.1) | Describe the sequence of activities involved in a formal review process. [CO3, K3] | 10 |
| (6.2) | Describe the contribution of walkthroughs in improving requirement clarity. [CO3, K3] | 10 |

7. Answer any one of the following:-

- | | | |
|-------|---|----|
| (7.1) | Discuss decision table testing with a detailed example. [CO4, K3] | 10 |
| (7.2) | Describe use case testing and its role in validating system behavior. [CO4, K2] | 10 |

8. Answer any one of the following:-

- | | | |
|-------|---|----|
| (8.1) | Explain the difference between test strategy and test approach with examples. [CO5, K3] | 10 |
| (8.2) | Describe different test estimation techniques with examples. [CO5, K3] | 10 |