

**MCA**  
**(SEM V) THEORY EXAMINATION 2021-22**  
**SOFTWARE TESTING**

*Time: 3 Hours*

*Total Marks: 70*

**Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**Attempt all questions in brief.**

**2 x 7 = 14**

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|------|---|
| a. ✓ | What is the basic objective of Software Testing?    |
| b. ✓ | Differentiate between Verification and Validation   |
| c. ✓ | Explain SQA activities in short.                    |
| d. ✓ | Differentiate the process of debugging and testing. |
| e.   | How to identify and refine the Risk?                |
| f. ✓ | Define the terms Test Case and Test Suite           |
| g. ✓ | What is Cyclomatic Complexity?                      |

**SECTION B**

**Attempt any three of the following:**

**7 x 3 = 21**

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|------|---|
| a. ✓ | Compare and Contrast bugs, Faults and Failures using suitable examples. |
| b.   | Explain the Data Flow and Mutation Testing.                             |
| c.   | Discuss in detail the Risk Analysis.                                    |
| d. ✓ | Discuss the Software testing tools and Software test plan.              |
| e. ✓ | Briefly explain the Object oriented Integration and System testing.     |

**SECTION C**

**Attempt any one part of the following:**

**7 x 1 = 7**

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|-----|---|
| (a) | Explain the various Software Testing Principles.      |
| (b) | Explain the different types of Verifications methods. |

**Attempt any one part of the following:**

**7 x 1 = 7**

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|-----|--|
| (a) | What is Control flow testing how it is differs from path testing?          |
| (b) | What are basic differences between Data Flow Testing and Mutation Testing? |

**Attempt any one part of the following:**

**7 x 1 = 7**

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|-----|--|
| (a) | Discuss in detail the different techniques for selection of test cases during Regression Testing.                                  |
| (b) | What is Regression Testing? Explain the various steps of the regression testing process. Which step is the most important and why? |

**Attempt any one part of the following:**

**7 x 1 = 7**

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|-----|--|
| (a) | What is Verification and Validation in Software Testing? Also Differentiate between Verification and Validation. |
| (b) | Discuss the Levels of Testing and Debugging in detail.   |

**Attempt any one part of the following:**

**7 x 1 = 7**

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|-----|--|
| (a) | What is Web Testing? How is different from user Interface Testing?                       |
| (b) | What is Object-Oriented Testing? How it can be performed? Discuss with suitable example. |