

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2023**

**SOFTWARE TESTING**

[Maximum Marks: **100**]

[Time: **3 Hours**]

**PART-A**

[Maximum Marks: **10**]

I. (Answer **all** questions in one or two sentences. Each question carries **2** marks)

1. Define software testing?
2. Define the purpose of black box testing techniques?
3. Define mutation testing?
4. List two commercial testing tools.
5. Define Debugger.

(5 x 2 = 10)

**PART-B**

[Maximum Marks: **30**]

II. (Answer **any five** of the following questions. Each question carries **6** marks)

1. Explain the goals of software testing.
2. Explain software testing methodology.
3. Describe Boundary Value Analysis [BVA].
4. Explain the logic coverage based testing methods.
5. Explain the benefits of inspection process.
6. Explain the advantages of test automation.
7. Describe the debugging guidelines.

(5 x 6 = 30)

**PART-C**

[Maximum Marks: **60**]

(Answer **one** full question from each Unit. Each full question carries **15** marks)

**UNIT – I**

- III. a. Explain the model for software testing with the help of a diagram. (10)
- b. Differentiate effective software testing and exhaustive software testing. (5)

**OR**

IV. Describe the software testing life cycle [ STLC] and its phases. (15)

**UNIT – II**

V. Explain state table based testing with an example. (15)

**OR**

VI. a. Explain structured walkthrough. (8)

b. Explain how unit validation testing is carried out. (7)

**UNIT- III**

VII. a. Explain the selection of testing tools. (8)

b. Explain the guidelines for automated testing. (7)

**OR**

VIII. Explain i) Winrunner ii) Silktest iii) Loadrunner iv) Jmeter v) Testdirector. (15)

**UNIT - IV**

IX. a. Describe the process of debugging. (10)

b. Explain debugging with watchpoints. (5)

**OR**

X. a. Explain i) Debugging with memory dump ii) Backtracking. (10)

b. Explain the types of debuggers. (5)

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