TED (15) – 6136
(REVISION — 2015)

Reg. No.....
Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

SOFTWARE TESTING (CT)

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Outline the need of software testing.
2. Interpret the term FSM.
3. State the purpose of data flow testing.
4. List any four challenges in testing for web-based software.
5. Name four types of debuggers. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Discuss the goals of software testing.
2. Differentiate between unit verification testing and validation testing.
3. Describe mutation testing. State the difference between primary mutants and secondary mutants.
4. Explain alpha testing and outline the entry and exit criteria of this testing method.
5. State the guidelines to be followed while selecting a testing tool.
6. Elaborate on how to ensure the functioning of correct sequence of navigations in a web application.
7. Explain how to correct bugs in a debugging process. (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

UNIT — I

III (a) Explain the following validation activities :

(i) Validation test plan (ii) Validation test execution. 8

(b) Discuss the critical activities involved in the test design phase of STLC. 7

OR

IV Explain how verification and validation of code is done. 15

UNIT — II

V (a) Outline the process involved in deriving test cases of cause-Effect graphing based testing. 5

(b) Explain the significance of cyclomatic complexity in path testing with a suitable example. Devise three methods for finding cyclomatic complexity number. 10

OR

VI Explain the following testing techniques.

(i) Inspections (ii) Structured walkthrough (iii) Technical reviews. (3×5=15)

UNIT — III

VII (a) State any five needs for automation of testing tools. 5

(b) Explain any five commercial testing tools. 10

OR

VIII Explain the following testing techniques used for testing object-oriented software.

(a) Regression testing. 8

(b) Testing of OO Classes. 7

UNIT — IV

IX Explain different debugging techniques. 15

OR

X (a) Describe the process of debugging with a neat diagram. 8

(b) Explain different debugging tools and different types of debuggers. 7

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