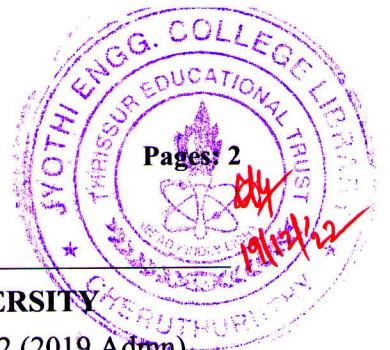


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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree (Minor) Examination June 2022 (2019 Admn)

Course Code: CST382

Course Name: INTRODUCTION TO SOFTWARE TESTING

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

- | | | Marks |
|----|--|-------|
| 1 | Define the terms <i>failure</i> , <i>error</i> and <i>fault</i> . | (3) |
| 2 | What are the different quality factors of a good software product? | (3) |
| 3 | Unit testing is done by the programmer who writes the code. Why? | (3) |
| 4 | What is meant by functional program testing? | (3) |
| 5 | What is du pair in a data flow graph? Give example | (3) |
| 6 | Draw the control flow graph for 'switch' and 'for' statement. | (3) |
| 7 | List the four key aspects in functional testing. | (3) |
| 8 | What are the two approaches of input domain modelling? Explain | (3) |
| 9 | What is symbolic execution tree? Give an example. | (3) |
| 10 | Discuss the disadvantages of grey box testing | (3) |

PART B

Answer one full question from each module, each carries 14 marks.

Module I

- | | | |
|----|--|-----|
| 11 | a) Compare verification and validation with respect to software testing process. | (8) |
| | b) Explain the three different testing methods | (6) |

OR

- | | | |
|----|---|------|
| 12 | a) Explain different levels of software testing in detail | (14) |
|----|---|------|

Module II

- | | | |
|----|--|------|
| 13 | a) Explain in detail, the steps in mutation testing. | (10) |
| | b) Write notes on JUnit. | (4) |

OR

- | | | |
|----|---|-----|
| 14 | a) Explain static unit testing in detail. | (7) |
| | b) Explain dynamic unit test in detail. | (7) |

Module III

- 15 a) Explain the steps for data flow testing in detail (8)
b) Explain the following terms with example (6)
i) coupling du pair ii) method and call coverage

OR

- 16 a) Write note on inheritance testing (4)
b) Draw the CFG for the following two code segments. (10)

```
if ( x < y )
{
    y = 0;
    x = x + 1;
}

x = 0;
while ( x < y )
{
    y = f ( x, y );
    x = x+1;
}
```

Module IV

- 17 a) Domain testing is an intelligent method of testing. Justify your answer by explaining different criteria for combining multiple partitions in domain testing. (14)

OR

- 18 a) Explain the types in functional testing (7)
b) Explain the steps in functional testing (7)

Module V

- 19 a) Explain the various techniques for grey box testing in detail. (14)

OR

- 20 a) Explain parameterized unit testing (6)
b) Explain the grey box testing methodology in detail. (8)
