

Code: 15A05505

B.Tech III Year I Semester (R15) Supplementary Examinations June 2018

SOFTWARE TESTING

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

1 Answer the following: (10 X 02 = 20 Marks)

- List the goals of testing.
- Define testing blindness and list its categories.
- Report different types of data flow machines.
- Illustrate the usage of transaction flows.
- List the restrictions to domain testing.
- Differentiate between boundary point and extreme point.
- Compare and contrast between path sum and path product.
- Illustrate decision tables with example.
- Differentiate between symmetric and anti-symmetric relations.
- Differentiate between dead state and unreachable state.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- Differentiate between control flow graph and flowchart.
 - Demonstrate various kinds of loops with respect to path testing using neat diagrams.

OR

- Explain briefly about structural bugs and coding bugs.

UNIT – II

- Demonstrate the strategies of data flow testing with neat diagrams.

OR

- Differentiate various transaction flow testing techniques.
 - Write a short note on slicing and dicing.

UNIT – III

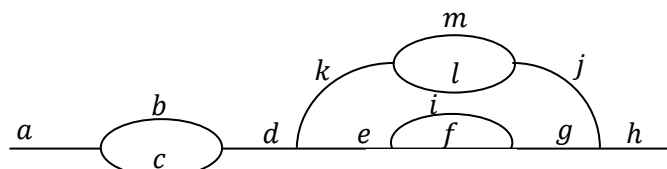
- Illustrate how two dimensional domains can be tested with neat diagrams.

OR

- Explain about domain and interface testing in detail.

UNIT – IV

- Calculate the maximum path count and lower path count for the following flow graph with path expression: $a(b+c)d\{e(fi)*fgj(m+l)k\}^*e(fi)*fgh$. Each link is given a weight of 1. Outer loop will take exactly four times and inner loop takes zero or three times its path expression.

**OR**

- Demonstrate by means of truth tables the validity of the following theorems of Boolean algebra:
(i) Associate laws. (ii) Demorgan's theorem for three variables. (iii) Distributive law. (iv) Absorption rule.

UNIT – V

- The behaviour of a finite state machine is invariant under all encodings. Justify.

OR

- Discuss node reduction algorithm for graph matrices.
 - What are the advantages and disadvantages of array representations?