Code No: 126ER

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, February/March - 2022
SOFTWARE TESTING METHODOLOGIES
(Common to CSE, IT)

Time: 3 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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1.a) Explain notational evolution of the following PDL code:

```
      INPUT X, Y                    V(U-1):=V(U+1) + U(V-1)
      Z := X + Y              ELL:V(U+U(V)) := U + V
      V := X - Y                    IF U = V GOTO JOE
      IF Z >=0 GOTO SAM             IF U > V THEN U := Z
JOE:  Z := Z - 1                    Z := U
SAM:  Z := Z + V                    END
      FOR U = 0 TO Z
      V(U),U(V) := (Z + V)*U
      IF V(U)= 0 GOTO JOE
      Z := Z - 1
      IF Z = 0 GOTO ELL
      U := U + 1
      NEXT U
```

b) What is software testing? Is complete testing possible? Explain. [7+8]

2.a) Discuss about integration, interface and system bugs.
b) Describe the nightmare list and when to stop testing. [7+8]

3.a) Discuss about complications in transaction flows.
b) What are data flow anomalies? Explain with examples. [7+8]

4.a) How to implement a transaction flow? Explain with suitable example.
b) Describe motivation and assumptions of data-flow testing. [8+7]

5.a) What are domain testing restrictions? Explain.
b) How to test one-dimensional domains? Explain in detail. [7+8]

6.a) Explain about closure compatibility and span compatibility.
b) What are the properties of nice domains? Explain. [8+7]

7.a) Discuss about path expressions in logic-based testing.
b) Describe maximum path arithmetic count with suitable example. [7+8]

8. Explain the following:
a) Transition bugs
b) The matrix of a graph. [7+8]

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