## PACE INSTITUTE OF TECHNOLOGY \& SCIENCES::ONGOLE (AUTONOMOUS)

III B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH/APRIL - 2023
SOFTWARE TESTING
(CSIT Branch)
Time: 3 hours
Max. Marks: 60
Note: Question Paper consists of Two parts (Part-A and Part-B)
PART-A
Answer all the questions in Part-A (5X2=10M).

| Q.No. |  | Questions | Marks | CO | KL |
| :---: | :--- | :--- | :---: | :---: | :---: |
| 1. | a) | Briefly Discuss about purpose of testing? | $[2 \mathrm{M}]$ | 1 |  |
|  | b) | Define Predicate. Give an example for Path Predicates? | $[2 \mathrm{M}]$ | 2 |  |
|  | c) | Define Flow anomaly detection? | $[2 \mathrm{M}]$ | 3 |  |
|  | d) | What is Good and bad state graphs? | $[2 \mathrm{M}]$ | 4 |  |
|  | e) | What are regression and confirmation Testing? | $[2 \mathrm{M}]$ | 5 |  |

PART-B
Answer One Question from each UNIT (5X10 $=50 \mathrm{M})$

| Q.No. |  | Questions | Marks | CO | KL |
| :---: | :---: | :---: | :---: | :---: | :---: |
| UNIT-I |  |  |  |  |  |
| 2 |  | What are the phases involved in software testing life cycle? | [5M] | 1 |  |
|  |  | Discuss about goals of software testing. | [5M] | 1 |  |
| OR |  |  |  |  |  |
| 3 |  | Explain the functional testing with example? | [5M] | 1 |  |
|  |  | Differentiate Functional and Non-Functional testing? | [5M] | 1 |  |
| UNIT-II |  |  |  |  |  |
| 4 |  | Write notes on Path predicates and achievable paths? | [5M] | 2 |  |
|  |  | Distinguish between Control Flow and Transaction flow. | [5M] | 2 |  |
| OR |  |  |  |  |  |
| 5 |  | Explain about application of dataflow testing? | [5M] | 2 |  |
|  |  | What is transaction instrumentation in transaction flow? Explain with example. | [5M] | 2 |  |
| UNIT-III |  |  |  |  |  |
| 6 |  | Explain applications for Reduction Procedure? | [5M] | 3 |  |
|  |  | Explain about path sensitization with example? | [5M] | 4 |  |
| OR |  |  |  |  |  |
| 7 |  | Discuss about Regular expressions and flow anomaly detection in detail. | [10M] | 3 |  |
| UNIT-IV |  |  |  |  |  |
| 8 |  | What is KV-Chart? Draw KV-chart for 3 variables. | [5M] | 4 |  |
|  |  | Compare structured and unstructured flow graphs and illustrate with an example. | [5M] | 4 |  |
| OR |  |  |  |  |  |
| 9 | a) | Explain State testing and testability tips? | [5M] | 4 |  |
|  | b) | Explain good and bad state graph with suitable example. | [5M] | 4 |  |


| UNIT-V |  |  |  |  |  |  |  |
| :---: | :--- | :--- | ---: | :---: | :---: | :---: | :---: |
| 10. | Explain Node reduction algorithm? | $[5 \mathrm{M}]$ | 5 |  |  |  |  |
|  |  | Briefly explain about matrix of graph relations. | $[5 \mathrm{M}]$ | 5 |  |  |  |
| OR |  |  |  |  |  |  |  |
| 11. |  | Discuss about Test Data Generation Tools? | $[10 \mathrm{M}]$ | 5 |  |  |  |

