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| **QUESTIONBANK(DESCRIPTIVE)**  **Subject Name withCode:**SOFTWARE TESTING &22A0530Ta  **Course&Branch:B.TECH CSE & CSE (AIML , CS)**  **Year& Semester: III-II Regulation:RG22** | |

**UNIT - I**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is testing? What is purpose of testing? | **L1 CO1 2M** |
|  | What are the goals of testing? | **L1 CO1 2M** |
|  | Compare testing and debugging? | **L2 CO1 2M** |
|  | Compare functional testing and structural testing? | **L2 CO1 2M** |
|  | Write the difference between designer and tester? | **L2 CO1 2M** |
|  | What are the difference between control flow graphs and flow chart? | **L2 CO1 2M** |
|  | Define process block? | **L1 CO1 2M** |
|  | What is predicate and explain about predicate interpretation? | **L2 CO1 2M** |
|  | What is path sensitizing? | **L1 CO1 2M** |
|  | What is path instrumentation? | **L1 CO1 2M** |
| **Descriptive Questions (Long)** | | |
|  | What are the applications of path testing? | **L1 CO1 12M** |
|  | Explain about taxonomy of bugs? | **L2 CO1 12M** |
|  | What are the consequences of bugs? Explain. | **L2 CO1 12M** |
|  | What is flow graph? Explain path testing with respective path predicates with example? | **L2 CO1 12M** |
|  | Define testing blindness? Explain three types of testing blindness? | **L2 CO1 12M** |
|  | State and explain various dichotomies in software testing? | **L2 CO1 12M** |
|  | Explain path sensitizing with example? | **L2 CO1 12M** |
|  | Explain about path instrumentation with example? | **L2 CO1 12M** |
|  | Explain the following briefly  a. Predicates  b. Predicates Expression.  c. Predicate Coverage | **L2 CO1 12M** |
|  | Explain about three types of loops? | **L2 CO1 12M** |

**UNIT - II**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is transaction? | **L1 CO2 2M** |
|  | What are the applications of transaction flows? | **L1 CO2 2M** |
|  | Write about inspections? Define data flow anomaly with example? | **L2 CO2 2M** |
|  | What are the different states of data objects ? write about Von Naumann machines? | **L1 CO2 2M** |
|  | What are the transaction flow junctions? | **L1 CO2 2M** |
| **6** | What are transaction flow mergers. | **L1 CO2 2M** |
| **7** | What is Loop-free path segment? | **L1 CO2 2M** |
| **8.** | What is simple path segment? | **L1 CO2 2M** |
| **9** | Define DU path. | **L1 CO2 2M** |
| **10** | What is Definition- Clear path segment. | **L1 CO2 2M** |
| Descriptive Questions (Long) | | |
| **11** | Explain about transaction flow testing? | **L2 CO2 12M** |
| **12** | Describe in detail about data flow anomaly state graph. | **L2 CO2 12M** |
| **13** | Explain about applications and implementations of transaction flow. | **L2 CO2 12M** |
| **14** | Explain transaction flow testing with example? | **L2 CO2 12M** |
| **15** | Compare and contrast transaction and data flow graph? | **L3 CO2 12M** |
| **16** | Explain briefly about   * 1. Definition clear path segment.   2. Loop – free path segment.   3. Simple path segment.   4. DU path. | **L2 CO2 12M** |
| **17** | Discuss dataflow testing strategies. | **L2 CO2 12M** |
| **18** | Explain applications of data flow testing? | **L2 CO2 12M** |
| **19** | Define transaction . Explain the steps involved in online transaction system. | **L2 CO2 12M** |
| **20** | Explain the classification and detection of anomaly. | **L2 CO2 12M** |

**UNIT - III**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is domain? | **L1 CO3 2M** |
|  | List the bugs that lead to domain errors? | **L1 CO3 2M** |
|  | What is ugly domain? | **L1 CO3 2M** |
|  | Differentiate between specified domain and implemented domain? | **L2 CO3 2M** |
|  | Define domain testing? | **L1 CO3 2M** |
|  | Write about random testing? | **L1 CO3 2M** |
|  | What is missing boundary bug? | **L1 CO3 2M** |
|  | What do you mean by equality and inequality predicates? | **L1 CO3 2M** |
|  | What is a decision table? | **L1 CO3 2M** |
|  | What are the applications of decision tables? | **L1 CO3 2M** |
| **Descriptive Questions (Long)** | | |
|  | Discuss in detail about domain closure and domain dimensionality? | **L2 CO3 12M** |
|  | Define domain testing ? Discuss various applications of domain testing? | **L2 CO3 12M** |
|  | State and explain with suitable examples various two dimensional domain bugs? | **L2 CO3 12M** |
|  | Discuss in detail the domains and interface testing? | **L2 CO3 12M** |
|  | Discuss in detail about nice and ugly domains? | **L2 CO3 12M** |
|  | Discuss how decision tables can be basics for test case design? | **L2 CO3 12M** |
|  | Explain about KV charts for one ,two and three variables and its specification. | **L2 CO3 12M** |
|  | Using K- Maps find the minimized expression f(w,x,y,z)=∑m(0,1,2,3,4,8,9,10,11,12). | **L3 CO3 12M** |
|  | Explain the testing strategy for one dimensional domains? | **L2 CO3 12M** |
|  | Write Boolean algebra roles. Illustrate the rules. | **L3 CO3 12M** |

**UNIT - IV**

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| **S.No.** | **Questions** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is path expression? | **L1 CO4 2M** |
|  | Define path products? | **L1 CO4 2M** |
|  | Define path sums? | **L1 CO4 2M** |
|  | What is distributive laws? | **L1 CO4 2M** |
|  | What is Absorption rule. | **L1 CO4 2M** |
|  | Define structured code. | **L1 CO4 2M** |
|  | What is Huang Theorem. | **L1 CO4 2M** |
|  | What is Regular Expression. | **L1 CO4 2M** |
|  | What is flow Anomaly Detection. | **L1 CO4 2M** |
|  | Give the applications of paths. | **L1 CO4 2M** |
| **Descriptive Questions (Long)** | | |
|  | Explain each of the following   * 1. Path expression   2. Path products   3. Path sums   4. Loops | **L2 CO4 12M** |
|  | Discuss distributive laws and absorption rule. | **L2 CO4 12M** |
|  | Explain about reduction procedure with example. | **L2 CO4 12M** |
|  | Explain maximum path count arithmetic with an example. | **L2 CO4 12M** |
|  | Explain about lower path count arithmetic with an example. | **L2 CO4 12M** |
|  | Explain the process finding the mean processing time of routine with example. | **L2 CO4 12M** |
|  | Explain about regular expressions and flow anomaly detection. | **L2 CO4 12M** |
|  | Explain about Huang theorem. | **L2 CO4 12M** |
|  | Give the applications of paths | **L2 CO4 12M** |
|  | Discuss the limitations and solutions in node by node reduction procedure. | **L2 CO4 12M** |

**UNIT - V**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | Define a state. | **L1 CO5 2M** |
|  | Define state table. | **L1 CO5 2M** |
|  | Define unreachable state. | **L1 CO5 2M** |
|  | When two states are said to be equivalent states. | **L1 CO5 2M** |
|  | What are the Advantages of state testing. | **L1 CO5 2M** |
|  | Define state bugs. | **L1 CO5 2M** |
|  | Define transition bugs | **L1 CO5 2M** |
|  | Define coding bugs. | **L1 CO6 2M** |
|  | Define finite state machine. | **L1 CO6 2M** |
|  | What is the difference between good and bad state graphs. | **L2 CO6 2M** |
| **Descriptive Questions (Long)** | | |
|  | Define state. Explain about state table. | **L1 CO5 12M** |
|  | Discuss about software implementation of state graph. | **L2 CO5 12M** |
|  | Write short notes on   * 1. State bugs   2. Encoding bugs | **L2 CO5 12M** |
|  | Explain un reachable and dead states. | **L2 CO5 12M** |
|  | Explain about good state graphs and bad state graphs. | **L2 CO5 12M** |
|  | Write the design guidelines for building the finite state machine into code. | **L3 CO5 12M** |
|  | Explain about states testing | **L2 CO6 12M** |
|  | Explain about switches , flags and unachievable paths. | **L2 CO6 12M** |
|  | Explain about transition bugs. | **L2 CO6 12M** |
|  | What are the difference between good state graphs and bad state graphs. | **L2 CO6 12M** |

**Signature of the Staff:**

**Signature of Department Academic Committee Member 1:**

**Signature of Department Academic Committee Member 2:**

**Signature of Department Academic Committee Member 3:**