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| **Velegapudi Ramakrishna Siddhartha Engineering College::Vijayawada**  **(Autonomous)**  IV /IV B Tech Degree Examinations(February/2023)  Seventh Semester  **Department of Information Technology**  **20IT7402A - SOFTWARE TESTING AND AUTOMATION** | | | | | | | | | |
| Time: 3Hrs | | | **MODEL QUESTION PAPER** | | | | Max Marks:70 | | |
| Part – A is Compulsory  Answer one (01) question from each unit of Part – B  Answers to any single question or its part shall be written at one place only | | | | | | | | | |
| ***Cognitive Levels(K): K1-Remember;K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create*** | | | | | | | | | |
| **Q. No** | | **Question** | | **Marks** | | **Course Outcome** | | **Cog. Level** | |
| **Part - A** | | | | **10X1=10M** | | | | | |
| 1 | a | State the goals of software testing. | | 1 | | | CO1 | | K1 |
|  | b | What are different states of a bug? | | 1 | | | CO1 | | K1 |
|  | c | Classify the bugs based on criticality. | | 1 | | | CO1 | | K1 |
|  | d | Differentiate between effective software testing and exhaustive software testing. | | 1 | | | CO1 | | K2 |
|  | e | Which type of testing is possible with BVA? | | 1 | | | CO4 | | K2 |
|  | f | What are the various phases of TALC? | | 1 | | | CO3 | | K1 |
|  | g | What is the significance of ROI Analysis? | | 1 | | | CO2 | | K1 |
|  | h | Specify different types of Test Automation Frameworks. | | 1 | | | CO3 | | K2 |
|  | I | What is Selenium IDE? | | 1 | | | CO2 | | K2 |
|  | j | What the difference is between verify and assert? | | 1 | | | CO4 | | K2 |
| **Part - B** | | | | **4X15 =60M** | | | | | |
| **UNIT - I** | | | | | | | | | |
| 2 | a | State and explain software testing myths and facts. | | | 8 | | CO1 | | K2 |
|  | b | V & V diagram is the basis for every type of testing. Comment on this statement. | | | 7 | | CO3 | | K4 |
| **(OR)** | | | | | | | | | |
| 3 | a | Explain different stages of Software testing life cycle with neat block diagram. | | | 8 | | CO3 | | K2 |
|  | b | Discuss briefly the verification and validations activities performed at each stage of Software development life cycle with neat diagram. | | | 7 | | CO3 | | K2 |
| **UNIT - II** | | | | | | | | | |
| 4 | a | A Program reads three numbers A, B, and C, within the range [1, 50] and prints the largest number. Design test cases for this program using Boundary Value Checking, Robust Testing and Worst-case Testing methods. | | | 8 | | CO4 | | K3 |
|  | b | Briefly explain State Table-Based Testing. | | | 7 | | CO2 | | K2 |
| **(OR)** | | | | | | | | | |
| 5 | a | Write a program for performing the four basic arithmetic operations using switch case statements   1. Draw the DD graph for the program 2. Calculate the cyclomatic complexity of the program 3. List all independent paths 4. Design all test cases from independent paths 5. Derive all du-paths and dc-paths using data flow testing. | | | 7 | | CO4 | | K3 |
|  | b | .Write short notes on   1. Data Flow Testing 2. Mutation Testing | | | 8 | | CO2 | | K2 |
| **UNIT - III** | | | | | | | | | |
| 6 | a | Describe the stages of Test Automation Life Cycle. | | | 7 | | CO3 | | K2 |
|  | b | Discuss in brief the SWOT analysis of Test Automation. | | | 8 | | CO3 | | K4 |
| **(OR)** | | | | | | | | | |
| 7 | a | Compare and contrast Waterfall Test Automation development model with W-Model | | | 5 | | CO3 | | K2 |
|  | b | Write short notes on   1. Agile Automation Challenges 2. Screen Components | | | 10 | | CO3 | | K2 |
| **UNIT - IV** | | | | | | | | | |
| 8 | a | Explain how to add filters to the name. | | | 5 | | CO2 | | K2 |
|  | b | Write short notes on   1. CSS Selectors 2. Page Objects | | | 10 | | CO2 | | K3 |
| **(OR)** | | | | | | | | | |
| 9 | a | Discuss about the architecture of Selenium. | | | 8 | | CO2 | | K2 |
|  | b | Explain the rules for automation. | | | 7 | | CO4 | | K2 |