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 **PRESIDENCY UNIVERSITY**

  **Bengaluru**

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| **End - Term Examinations – JANUARY 2025** |
| **Date:** 06 - 01 - 2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** SOIS | **Program:** BCA |
| **Course Code:** CSA2010 | **Course Name:** Software Testing |
| **Semester**: 5 | **Max Marks**: 100 | **Weightage**: 50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** | **30** | **40** | **30** | **NA** | **NA** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

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| **Answer ALL the Questions. Each question carries 2marks. 10Q x 2M=20M** |
| **1** | Define software testing metrics. | **2 Marks** | **L1** | **CO1** |
| **2** | Define DLC. | **2 Marks** | **L1** | **CO1** |
| **3** | What is Path Testing? | **2 Marks** | **L1** | **CO1** |
| **4** | List any 5 Software Testing Methods? | **2 Marks** | **L1** | **CO1** |
| **5** | Define Software errors. | **2 Marks** | **L1** | **CO1** |
| **6** | An input field takes the year of birth between 1900 and 2004 What are the boundary values for testing this field? | **2 Marks** | **L1** | **CO1** |
| **7** | Define defect density. | **2 Marks** | **L1** | **CO1** |
| **8** | Define Software Quality Assurance. | **2 Marks** | **L1** | **CO1** |
| **9** | What is Equivalence Class Testing? | **2 Marks** | **L1** | **CO1** |
| **10** | List the advantages of Black box testing. | **2 Marks** | **L1** | **CO1** |

**Part B**

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| **Answer the Questions Total 80 Marks** |
| **11.** | **a.** | Given the following fragment of code, how many tests are required for 100% decision coverage? Write the test cases.if width > lengththen biggest\_dimension = widthif height > widththen biggest\_dimension = heightend\_ifelse biggest\_dimension = lengthif height > lengththen biggest\_dimension = heightend\_ifend\_if | **5****Marks** | **L2** | **CO2** |
| **b.** | Compare black box and white box testing | **5****Marks** | **L2** | **CO2** |
| **or** |
| **12.** | **a.** | Explain Rapid Application Development? | **5****Marks** | **L2** | **CO2** |
| **b.** | Explain the difference between Testing Techniques and Testing Tools? | **5****Marks** | **L2** | **CO2** |
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| **13.** | **a.** | Explain the phases of automation process with the help of a neat diagram. | **10****Marks** | **L2** | **CO2** |
| **or** |
| **14.** | **a.** | Demonstrate the defect life cycle with the help of a neat diagram. | **10****Marks** | **L2** | **CO2** |

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| **15.** | **a.** | Show the fundamentals of software testing for Quality assurance. | **10****Marks** | **L1** | **CO1** |
| **Or** |
| **16.** | **a.** | How do you write abug reports found while testing applications  | **10****Marks** | **L1** | **CO1** |

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| **17.** | **a.** | Consider a Mailing Application consisting of 5 basic features. List different types of tests that are to be carried out to test these 5 features. Develop the test cases and discuss the test results. | **15****Marks** | **L3** | **CO3** |
| **Or** |
| **18.** | **a.** | Employ Test cases for any gaming mobile applications and prepare bug report for the bugs encountered in testing process | **15****Marks** | **L3** | **CO3** |

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| **19.** | **a.** | Develop a program in a language of your choice to solve the triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Assume that the upper limit for the size of any side is 10. Derive test cases for your program based on boundary-value analysis, discuss the results. | **15****Marks** | **L3** | **CO3** |
| **Or** |
| **20.** | **a.** | Develop a program in any suitable language to implement the NextDate function. Analyze it from the perspective of equivalence class value testing, derive different test cases and discuss the test results. | **15****Marks** | **L3** | **CO3** |

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| **21.** | **a.** | Summarize the STLC model using a block diagram. | **10****Marks** | **L2** | **CO2** |
| **b.** | Differentiate between Verification and Validation. | **10****Marks** | **L2** | **CO2** |
| **Or** |
| **22.** | **a.** | Explain the Agile model. | **10****Marks** | **L2** | **CO2** |
| **b.** | Contrast any two software testing techniques. | **10****Marks** | **L2** | **CO2** |

**\*\*\*\*\* BEST WISHES \*\*\*\*\***