Enrollment No......................................

Faculty of Engineering
End Sem Examination Dec-2023
OE00046 Software Testing

Programme: MCA / BCA-   Branch/Specialisation: Computer
MCA (Integrated)   Application

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1   i.   What is the basic objective of software testing?   **1**
         (a) To prevent defects
         (b) To make sure the end results meet the user requirements.
         (c) To make sure that it satisfies System Requirement Specifications (SRS)
         (d) All of these

   ii.   What is a software defect?   **1**
         (a) An issue identified by the user during testing
         (b) A feature requested by the user
         (c) A document outlining project requirements
         (d) A project schedule

  iii.   What is the main goal of Cause and Effect graphing in black box   **1**
         testing?
         (a) Focusing on boundary values
         (b) Identifying equivalence classes
         (c) Creating a visual representation of test cases
         (d) Testing values at the boundaries

   iv.   White box techniques are also classified as   **1**
         (a) Design based testing   (b) Structural testing
         (c) Error guessing   (d) Strong testing

   v.   If a software testing team is doing testing without planning and   **1**
         documentation, then this type of testing is called as-
         (a) Unit testing   (b) Regression testing
         (c) Adhoc Testing   (d) Sanity Testing

vi. Which of the following is not a testing type? **1**
(a) Integration testing   (b) Performance testing
(c) Agile testing   (d) Exploratory testing

vii. Which of the following is not a part of the test plan? **1**
(a) Schedule   (b) Risk
(c) Incident reports   (d) Entry and exit criteria

viii. In Software Testing the defect can occur due to- **1**
(a) Improper implementation (b) Missing coding
(c) Extra coding   (d) All of these

ix. Which of the following testing cannot be automated? **1**
(a) Unit testing   (b) Regression Testing
(c) Exploratory testing   (d) End-to-end Testing

x. Which of the following is used to interact with the web page elements in Selenium? **1**
(a) Webdriver (b) TestNG (c) JUnit   (d) None of these

Q.2 i. Define software testing. What is the need of testing? **2**

ii. Define validation and verification. **3**

iii. (a) Define software quality. What are quality attributes? **5**
(b) What is a test case?

OR iv. Explain the role of testing within the software development lifecycle **5**

Q.3 i. Difference between black box and white box testing. **4**

ii. Explain the following: **6**
(a) Cause-Effect graphing   (b) Statement coverage
(c) Domain Testing

OR iii. What is localization and internationalization testing? **6**
What is equivalence partitioning and boundary value analysis?

Q.4 i. What is regression testing? Explain different types of regression testing. **4**

ii. Explain the following with suitable examples. **6**
(a) Usability testing   (b) Adhoc testing
(c) Exploratory Testing

OR iii. Explain different phases of STLC in detail with entry criteria and exit criteria of each phase. **6**

Q.5 i. What is a defect in software testing? Explain defect life cycle with diagram. **4**

ii. What is a test scenario? Write the steps to create test scenarios. **6**

OR iii. Explain defect management process in detail. **6**

Q.6 Attempt any two:

i. Define Selenium and its various tools including WebDriver, Selenium IDE, Selenium RC, Selenium Grid. **5**

ii. What are test management tools and why do we need them? Write their features and give examples of some most used test management tools. **5**

iii. What is automation testing? Explain the process of automation testing. **5**

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Scheme of Marking

OE00046 (T)- Software Testing

Q.1

i) What is the basic objective of software testing? **1**
    d. All of the above

ii) What is a software defect? **1**
    a. An issue identified by the user during testing

iii) What is the main main goal of Cause and Effect graphing in black box testing? **1**
    c. Creating a visual representation of test cases

iv) White box techniques are also classified as **1**
    b. Structural testing

v) If a software testing team is doing testing without planning and documentation , then this type of testing is called as **1**
    c. Adhoc Testing

vi) Which of the following is not a testing type **1**
    c. Agile testing

vii) Which of the following is not a part of the test plan? **1**
    c. Incident reports

viii) In Software Testing the defect can occur due to **1**
    d. All the above

ix) Which of the following testing cannot be automated? **1**
    c. Exploratory Testing

x) Which of the following is used to interact with the web page elements in Selenium? **1**
    a. Web driver

Q.2

i. Define software testing. What is the need of testing? **2**
    software testing: 1 Mark
    need of testing: 1 Mark

ii. Define validation and verification. **3**
    validation: 1.5 Marks
    verification: 1.5 Marks

iii.   a. Define software quality. What are quality attributes? **5**
    b. What is a test case?
    Software quality: 1.5 Marks
    Quality attributes: 1.5 Marks
    Test case: 2 Marks

OR iv. Explain the role of testing within the Software development lifecycle **5**
    Each role :   1 Marks

Q.3

i. Difference between black box and white box testing. **4**
    Each difference :   1 Marks

ii. Explain the following **6**
    a. Effect graphing :   2 Marks
    b. Statement coverage :   2 Marks
    c. Domain Testing :   2 Marks

OR iii.   a. What is localization and internationalization testing? **6**
    b. What is Equivalence partitioning and Boundary value analysis?
    Localization :   1.5 Marks
    Internationalization :   1.5 Marks
    Equivalence partitioning :   1.5 Marks
    Boundary value analysis :   1.5 Marks

Q.4

i. What is regression testing and compatibility testing? **4**
    Regression testing :   2 Marks
    Compatibility testing :   2 Marks

ii. Explain the following with suitable examples **6**
    a. Usability testing   2 Marks
    b. Adhoc testing   2 Marks
    c. Exploratory Testing   2 Marks

OR iii. Explain different phases of STLC- **6**
    a. Test planning   2 Marks
    b. Test design   2 Marks
    c. Test execution   2 Marks

Q.5

i. What is a defect in software testing? How to track and manage defects? **4**
    Definition :   2 Marks
    How to track :   1 Marks
    Manage defect :   1 Marks

ii. What is a test scenario? Write the steps to create test scenarios. **6**
    Definition :   2 Marks
    Each step :   1 Marks

OR iii. Explain defect management process in detail. **6**
    Each process :   1 Marks

Q.6   Attempt any two:

i. Define Selenium and its various tools including WebDriver, Selenium IDE, Selenium RC, Selenium Grid. **5**
    Selenium :   1 Marks
    WebDriver :   1 Marks
    Selenium IDE :   1 Marks
    Selenium RC :   1 Marks
    Selenium grid :   1 Marks

ii. What are test management tools and why do we need them?Write **5** their features and give examples of some most used test management tools.

Definition : 1 Marks

Need : 1 Marks

Features: 2 Marks

Examples : 1 Marks

iii. What is automation testing? Explain the process of automation **5** testing.

Definition : 2 Marks

Process : 3 Marks

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