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The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Electrical and Computer Engineering

Study Programme	: Bachelor of Software Engineering Honours Bachelor of Technology Honours in Engineering
Name of the Examination	: Final Examination
Course Code and Title	**: EEI5467/EEX5467 Software Testing and Quality Assurance**
Academic Year	: 2021/2022
Date	: 30th January 2023
Time	: 0930-1230hrs
Duration	: **3 hours**

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **Two Sections** and ~~**Three (3)**~~ Four(4) pages.
3. **Answer all the questions.** The marks belongings to each part are displayed separately.
4. Answer for each question should commence from a new page.
5. This is a Closed Book Test **(CBT).**
6. Answers should be in clear handwriting.

SECTION - 1 [20 Marks] [Answer All Questions]

1. One of the fields on a form contains a text box that accepts alphanumeric values. Identify the Valid Equivalence class
   a) BOOK
   b) Book
   c) Boo01k
   d) Book

2. Enough testing has been performed when:
   a) time runs out.
   b) the required level of confidence has been achieved.
   c) no more faults are found.
   d) the users won't find any serious faults.

3. Enough testing has been performed when: In a system designed to work out the tax to be paid: An employee has $4000 of salary tax free. The next $1500 is taxed at 10%, The next $28000 is taxed at 22%. Any further amount is taxed at 40%. To the nearest whole pound, which of these is a valid Boundary Value Analysis test case?
   a) $1500
   b) $32001
   c) $33501
   d) $28000

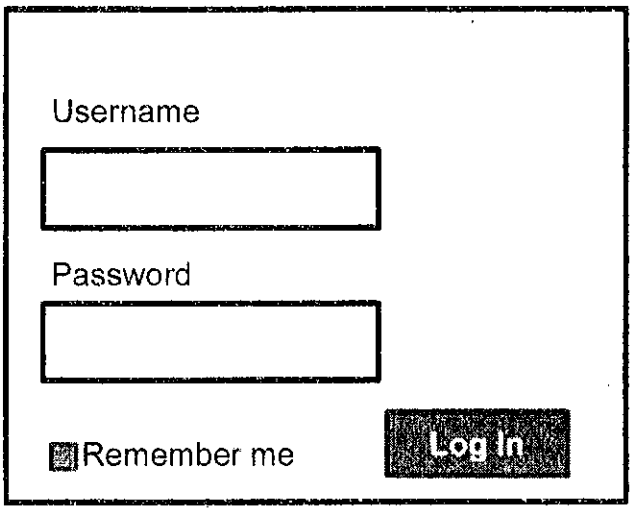
4. When should we run regression tests? Choose TWO Answers.
   a) Every week
   b) After the software has changed
   c) As often as possible
   d) When the environment has changed

5. _____ will be performed by the people at client's own locations.
   a) Alpha testing
   b) Field testing
   c) Performance testing
   d) System testing

6. Which of the following would NOT normally form part of a test plan?
   a) Features to be tested
   b) Incident reports
   c) Risks
   d) Schedule

[12 Marks]

7. Write down **two (2)** positive and **two (2)** negative test scenarios for following UI **[8 Marks]**



SECTION - 2 [Answer All Questions]

Question 01 [20 Marks]

1. List and define **five (5)** quality attributes. **[5 Marks]**
2. Compare and contrast objective of Testing Vs Debugging. **[4 Marks]**
3. List down **four (4)** risks associated with software testing with examples. **[8 Marks]**
4. What is contingency planning? Briefly describe **[3 Marks]**

Question 02 [20 Marks]

1. What are the **three (3)** main categories of costs associated with software quality. Explain each category with an example. **[9 Marks]**

2. What are the **four (4)** main types of acceptance testing? **[4 Marks]**

3. Prototypes explore different aspects of an intended design. List down **four (4)** different prototype models. **[7 Marks]**

Question 03 [20 Marks]

Following are the major environment involve in deployment process and testing



1. Explain the main purpose and objective of those environment.
   - Dev
   - QA
   - UAT
   - PROD

[8 Marks]

2. Briefly describe **three (3)** challenges in setting up a QA environment. **[6 Marks]**

3. Following are the major components of quality engineering process. **Briefly** describe each of those by including main goal and activities of each phase.
   - Pre-QA activities
   - In-QA activities
   - Post-QA activities

   [6 Marks]

Question 04 [20 Marks]

"Verification and Validation (V&V) is the process of checking that a software system meets specifications and that it fulfils its intended purpose. "

1. Define and distinguish verification and validation. **[6 Marks]**

2. List down the techniques used for Verification and Validation **[4 Marks]**

3. Differentiate Static Testing and Dynamic Testing **[6 Marks]**

4. List down the similarity and differences between system and acceptance testing **[4 Marks]**