

SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

Higher National Diploma in Information Technology

Second Year Second Semester Examination – 2022

HNDIT 4022 – Software Quality Assurance

Instructions:

Answer five (5) questions only
Every question carry equal marks

No. of questions: 06

No. of pages : 03

Time : Three hours

Question 01

- i. What is Software Testing? (03 Marks)
- ii. Explain the difference between failure, error and fault. (06 Marks)
- iii. Define the terms Test suite and Test Oracle. (06 Marks)
- iv. What are the main activities in software Quality Assurance? (05 Marks)

[Total 20 marks]

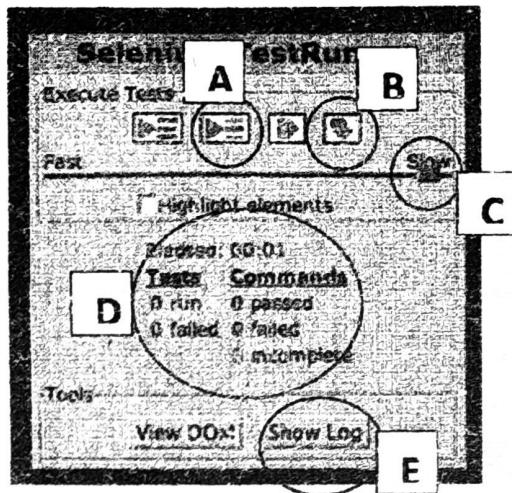
Question 02

- i. Differentiate Verification and Validation? (06 Marks)
- ii. Briefly describe three main types of Software Review. (06 Marks)
- iii. What is the main role of the following team members in formal review?
 - a. Moderator/Review Leader
 - b. Scribe/Recorder (04 Marks)
- iv. List the advantages of software review. (04 Marks)

[Total 20 marks]

Question 03

- i. Define the unit testing with an example. (03 Marks)
- ii. Differentiate Performance testing and Stress testing. (06 Marks)
- iii. Briefly describe three major tools in Test Automation tool “Selenium” (06 Marks)
- iv. Identify the Circled component and their task of the “Selenium TestRunner” Window (05 Marks)



[Total 20 marks]

Question 04

- "White box testing is also called as code base testing" Do you agree with this statement? Justify your answer. (04 Marks)
- Briefly explain two different types of Black Box testing. (06 Marks)
- How many test cases are wanted to test the following code using white box testing statement coverage method and branch coverage method.

```

Input(Y)
If(Y <= 0) then
Y := -Y
end_if
While(Y>0) do
Input(X)
Y := Y-2
End while
  
```

(04 Marks)

- Differentiate the Black Box Testing and White Box Testing.

(06 Marks)

[Total 20 marks]

Question 05

- Compare top-down and bottom-up approach in integration testing. (06 Marks)
- Briefly describe the stubs and drivers using an example. (04 Marks)
- What are the Test Environment Management elements? (06 Marks)
- List four main roles of QA Engineer. (04 Marks)

[Total 20 marks]

Question 06

Write a short note of the following

- i. Product Risk
- ii. System Testing
- iii. Quality Review
- iv. Risk Management

[Total 20 Marks]