

**UNITED INTERNATIONAL UNIVERSITY (UIU)**

Dept. of Computer Science & Engineering

Trimester: Spring 2023

Course No: CSE 4495 Title: Software Quality Assurance and Testing

Section: A

**Time: 20 minutes Marks: 20**

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| **Name** |  | **ID** |  |

1. During a regular periodic testing phase of your software you obtained the following log:

“--*Testing started: 12:00 AM, February 12, 2023*

*--****Failure Occurred****: Reason: Bad Output, Timestamp:* ***2:40 AM, February 12, 2023***

*.*

*--****Failure Occurred****: Reason: System Crash, Timestamp:* ***5:30 AM, February 12, 2023***

*=>Rebooting System=>Reboot Successful.*

*=>System Online; Timestamp:* ***5:50 AM, February 12, 2023***

*…<Log Corrupted >*

”

As you can see, the log failed to record the system details after the first crash. But from your health monitoring API you know get the following statistics –

*#***Total testing time = 600 min**

#**Failures = 3, Crashes =2**

#**Availability = 94.17%**

With this and the knowledge from previous testing that your system has MTBF of roughly 145-180 minutes. Can you find out the probable time window of the second crash (i.e. 3rd failure)? **[15]**

1. Describe what it means for a system to scale out vertically or horizontally. Provide examples. **[5]**