**VIT***

**Vellore Institute of Technology**

# School of Information Technology and Engineering

## Summer-II Semester 2023-2024

### Mid-Term

**Programme Name & Branch:** MCA

**Course Name & code:** Software Process and Metrics & ITA6014

**Class Number (s):** VL2022230701041, 1042, 1043, 1044, 1045, 1046

**Faculty Name (s):** Prof. Thanga Mariappan L, Prof. Sweta Bhattacharya, Prof. Nithya S, Prof. Vellingiri J, Prof. Charanya R, Prof. Mangayarkarasi R

**Exam Duration: 90 Min.**                                **Maximum Marks: 50**

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| Q.No. | Question |
|---|---|

1. In order to assess and improve software development and project management practices which framework are used in the industry? Explain it with neat diagram.

2. Suppose you are working as a quality engineer in 'ABC software pvt ltd'. You need to ensure the software developed should be reliable, adaptable, deliverable, and should be within the budget. On what basis the quality of the software will be evaluated and improved? Justify it with the type of measurements that will be used for developing the software. Also explain about scope of software measurements.

3. Assume yourself as a project manager of 'XYZ software pvt ltd'. And you have proposed a new tool, technique or method. You have been asked to investigate the tool, technique and method in a scientific way. Your scientific investigation is likely to involve a formal experiment approach. Explain the various principles applicable for this approach.

4. Assume that you're studying the relationship between newborns' weight and length. You have the weights and lengths of the 10 babies born last month at your local hospital. Calculate the Pearson correlation coefficient between length and weight.

| Weight (kg) | 3.63 | 3.02 | 3.82 | 3.42 | 3.59 | 2.87 | 3.03 | 3.46 | 3.36 | 3.3 |
|---|---|---|---|---|---|---|---|---|---|---|
| Length (cm) | 53.1 | 49.7 | 48.4 | 54.2 | 54.9 | 43.7 | 47.2 | 45.2 | 54.4 | 50.4 |

5. Sample of test scores from a class

DA-1: 47, 50, 62, 76, 98, 54, 38, 66, 24, 82.
DA-2: 43, 40, 32, 36, 48, 24, 28, 66, 42, 90.
Quiz-1: 29, 30, 42, 36, 88, 64, 48, 76, 44, 53.

Represent the following sets into a box plot and identify the outliers.