Printed Pages: 02 **Sub Code: MTCS033**

Paper Id: 210203 **Roll No.** | | | | | | | | | | |

M. TECH.
(SEM-II) THEORY EXAMINATION 2018-19
SOFTWARE METRICS AND QUALITY ASSURANCE

Time: 3 Hours ***Total Marks: 70***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 7 = 14**

a. Define Software Quality.
b. Explain Reliability.
c. What is LOC?
d. Explain Measurement Theory.
e. Define Validation.
f. Explain Software Project Assessment.
g. Explain Cyclomatic Complexity

SECTION B

2. Attempt any *three* of the following: **7 x 3 = 21**

a. Explain the following with reference to Measurement Theory (i) Level of Measurement (ii) Measurement Error (iii) Causality Criteria
b. Explain the Quality tools in Software development in detail.
c. Explain the Followings (i) Pareo Diagram (ii) Histogram
d. Describe the followings (i) Scatter Diagram (ii) Cause & Effect Diagram
e. Describe the Do's & Don'ts related to software process improvement in detail.

SECTION C

3. Attempt any *one* part of the following: **7 x 1 = 7**

(a) Explain the Process of Software Project Assessment in detail.
(b) Explain the followings (i) Halstead's Software Science (ii) Rayleigh Model

4. Attempt any *one*part of the following: **7 x 1 = 7**

(a) Explain the Object Oriented Projects with its concept and Constructs.
(b) Explain the process of collecting customer outage data for quality improvement.

5. Attempt any *one* part of the following: **7 x 1 = 7**

(a) Explain the followings (i) Product Quality Metrics (ii) Metrics for Software Maintenance
(b) What is metrics program? Explain with suitable example.

6. Attempt any *one* part of the following: **7 x 1 = 7**

(a) Write short notes on followings (i) Control Chart (ii) Function point Metrics
(b) Write a case study on Measuring Process Improvement at Activity Levels.

7. Attempt any *one* part of the following: **7 x 1 = 7**

(a) How the software process improvement can be measure through function point metrics? Explain
(b) Explain the followings (i) Audit Assessment (ii) Alignment Principle (iii) Reliability Availability And Defect Rate