

**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**  
**III-B.TECH-I-Semester End Examinations (Regular) - December- 2024**  
**SOFTWARE METRICS AND MEASURES**  
**(CSE)**

[Time: 3 Hours]

[Max. Marks: 60]

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks.

**PART-A****(10 Marks)**

1. a) Define Measurement. [1M]
- b) Write the scope for Software metrics. [1M]
- c) What are the data normally used for software analysis? [1M]
- d) List any four data analysis techniques. [1M]
- e) Write the definition of Process and Product. [1M]
- f) What is Function Points (FP)? [1M]
- g) Define Software Quality Metrics. [1M]
- h) What is Mean Time Between Failure (MTBF)? [1M]
- i) Write a note on Problem Tracking Report model. [1M]
- j) What is Defect Removal Efficiency (DRE)? [1M]

**PART-B****(50 Marks)**

2. Explain measurement and How will you measure a Software Code for a System? [10M]  
Identify the entities, attributes and possible measure in it.

**OR**

3. Describe the goal-based framework for software metric and the theory behind this. [10M]

4. Explain any statistical methods that are used for data collection and data analysis. [10M]  
Illustrate with example.

**OR**

5. What is the difference between quantitative estimation and qualitative estimation with regard to the performance measurement of software? Give examples. [10M]

6. Describe suitable schemes for measuring internal product size attributes. [10M]

**OR**

7. How the structure is used for measuring the product attributes? How the product qualities are determined? [10M]

8. Explain any four software quality metrics for process and products. How these values will be helpful for software engineers? [10M]

**OR**

9. Discuss the metrics program as used in Motorola and IBM. [10M]

10. Describe in detail about the Rayleigh's model in detail. [10M]

**OR**

11. What is software reliability? Explain how the software reliability growth model is evaluated. [10M]

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