

Roll No. 

Total No. of Pages : 02

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**M.Tech.(IT)E1 (2015 & Onwards)/(CSE Engg.)EI-I (2015 to 2017)**  
**(Sem.-2)****SOFTWARE METRICS****Subject Code : MTCS-203****Paper ID : [72887]****Time : 3 Hrs.****Max. Marks : 100****INSTRUCTION TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- Q1. a) What is measurement in software engineering? Discuss the scope of software metrics. (10)
- b) What is meant by empirical investigation? What are various types of investigations? Explain planning and conducting investigations. (10)
- Q2. a) What is good data? How to collect good data? How to analyze software measurement data? (08)
- b) Explain various statistical techniques for data collection and analysis. (12)
- Q3. a) What is meant by internal product attributes? Explain various structural measures in any software. (10)
- b) What are various aspects of software quality? Explain how to measure software quality. (10)
- Q4. a) Explain parametric reliability growth model with the help of suitable software example. (12)
- b) Explain the importance of operational environment in software reliability. (08)
- Q5. a) What is the intent of object oriented metrics? Discuss various characteristics of object oriented metrics. (10)
- b) Compare and contrast LK suite and CK suite of metrics for object-oriented systems. (10)

- Q6. a) What is the difference between static and dynamic object oriented metrics? Discuss with the help of suitable example. (10)
- b) What is meant by Class Usage? How it can be measured in any object oriented software discuss with the help of suitable example? (10)
- Q7. a) Explain the distinguished characteristics of component-based metrics. (10)
- b) Discuss any two component-based software metrics with the help of suitable example. (10)
- Q8. Explain the following : (5 × 4)
- a) Measuring productivity
  - b) Tools in software measurement
  - c) Data structure metrics
  - d) Frequency distribution in software metrics

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