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**Total No. of Pages: 01**  
**Total No. of Questions: 09**

**MCA (Sem.-3<sup>rd</sup>)**  
**SOFTWARE ENGINEERING**  
**Subject Code: MCA-303**  
**Paper ID: B1159**

**Time: 3 Hrs.****Max. Marks: 100****INSTRUCTIONS TO CANDIDATE:**

1. Attempt any One questions from Section A, B, C and D
2. Section E is compulsory.

**SECTION A**

1. What do you mean by Software metrics? Discuss in brief the various characteristics of ideal software metrics. (20)
2. Explain in detail problem analysis and requirements specification. (20)

**SECTION B**

3. Compare various design methodologies used in object-oriented design. (20)
4. What is software design? What is its need? How design of software related to evaluation of software? Categorize software design (20)

**SECTION C**

5. What is the significance and goals of software testing? Explain various testing strategies. (20)
6. Write short notes on the following: (20)
  - a. Verification and validation
  - b. Integration and System Testing

**SECTION D**

7. What do you mean by structured analysis? Explain in detail the tools used for analysis of any Software system. (20)
8. Explain in detail the various cost estimation models used in Software Engineering. (20)

**SECTION E**

9. Answer Briefly: (20)
  - a. What is testing?
  - b. What is meant by fault and failure?
  - c. Define risk.
  - d. What is operational feasibility?
  - e. What is white box testing?
  - f. List and explain what various cost estimation techniques are?
  - g. What is a prototype?
  - h. Explain waterfall model?
  - i. Compare and contrast software quality assurance and software testing.
  - j. What is the purpose of design documentation?