Roll No. | | | | | | | | | | | |  Total No. of Pages : 02

Total No. of Questions : 09

MCA (2015 & Onward) (Sem.–6)

# SOFTWARE TESTING & QUALITY MANAGEMENT

Subject Code : MCA-604

Paper ID : [74758]

Time : 3 Hrs.  Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

## SECTION-A

Q1. a) Define and differentiate between defect, error, bug, failure and fault with examples.

b) Explain the objectives and purpose of software testing.

Q2. Elaborate in detail the different testing techniques and strategies.

## SECTION-B

Q3. What is Data Flow testing? Discuss the data flow testing strategies and its applications.

Q4. Define the terms Path Expression and Path Products. Explain the Reduction Procedure for converting a flowgraph into a path expression.

## SECTION-C

Q5. What do you mean by Software Quality? Discuss the various software quality metrics.

Q6. What is Capability Maturity Model? What are the different levels of CMM? Compare CMM and Six Sigma.

## SECTION-D

Q7. Define Software Quality Assurance (SQA). Discuss SQA activities in detail.

Q8. Elaborate in detail the different tools of software quality control.

## SECTION-E

Q9. Briefly answer the following :

a) What is the difference between Debugging and Testing?

b) Explain the problem of infeasible paths with an example.

c) What do you mean by testing levels?

d) What are path predicates?

e) What is Data Flow Model?

f) What are Path Sums?

g) State the generic flow-anomaly detection problem.

h) What is Six Sigma concept for software quality?

i) Differentiate between software quality assurance and quality control.

j) What are quality audits? What is their use?