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
M.Code : 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) Discuss different objectives and principles of software testing.

   b) What is meant by Structural testing? Explain.

Q2 Discuss the following types of software testing techniques:

   a) Unit Testing

   b) System Testing

SECTION-B

Q3 a) What are different path-predicates used for path testing? Explain.

   b) Explain different applications of data flow testing.

Q4 a) What is flow-anomaly-detection? Explain how approximation in number of paths helps in software testing.

   b) Explain the concepts of path-sums and loops for path testing.

SECTION-C

Q5 a) What are different standards used for measuring software quality? Explain.

   b) What is TQM model for software quality? Explain.

Q6 a) What is meant by SPICE project? Explain.

   b) What are different tools and techniques used for quality planning? Explain.

SECTION-D

Q7   a)   What is meant by quality assurance? Explain.

     b)   How Flowcharts are helpful for software quality control? Explain.

Q8   Explain the following :

     a)   Quality Improvement

     b)   Outputs for quality planning

SECTION-E

Q9   Answer briefly :

     a)   Comment on limitations of testing.

     b)   Differentiate error and bug.

     c)   What is meant by Failure Analysis?

     d)   Define Data Flow Model.

     e)   What are reduction procedures for software testing?

     f)   Discuss briefly about six-sigma-concept.

     g)   What is meant by CMM used for software quality?

     h)   What are the results for standards of quality control measurement?

     i)   What are different outputs for quality control?

     j)   Discuss the use of completed checklist for quality control.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.