15628

MCA 5th Semester Examination

Software Quantity Assurance (NS)

MCA-E54

Time : 3 Hours   **Max. Marks : 60**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all. Question no. 9 in section E is compulsory. Rest attempt one question from the sections A, B, C & D.

SECTION - A

1. (a) Discuss the tasks involved in software quality assurance activities.   (5)

    (b) What is defect removal efficiency in quality metrics? (5)

OR

2. (a) Explain software quality assurance life cycle in detail.   (6)

    (b) Discuss the various software standards for software quality assurance (SQA).   (4)

SECTION - B

3. (a) Explain various levels of capability maturity model. (5)

    (b) Discuss ISO 9126 key quality factor attributes.   (5)

OR

4. (a) Discuss Halstead quality matrix in detail.   (4)

    (b) What is Kitchenham's approach for the development of software quality?   (6)

SECTION - C

5. (a) What is the need for designing test cases? Explain. (5)

    (b) Explain equivalence class partition in detail.   (5)

OR

6. (a) Explain in detail boundary value analysis.   (5)

    (b) What is testing? Discuss the limitations of testing.   (5)

SECTION - D

7. What is coverage based testing? Explain statement coverage, branch coverage and conditional coverage in detail   (10)

OR

8. (a) Compare strong versus weak testing with suitable examples.   (5)

    (b) What is performance testing? Discuss any five types of performance testing.   (5)

SECTION - E

9. Explain the following:

    (a) Error   (b) Failure

    (c) Verification   (d) Validation

    (e) Drivers   (f) Stubs

    (g) LOC   (h) Alpha testing

    (i) SQA   (j) Software perspective

                                                          (2×10=20)