

IT16603 – Software Testing and Quality Assurance

(Regulation 2016)

Time: Three hours

Maximum : 80 Marks

Answer **ALL** questions**PART A - (8 X 2 = 16 marks)**

1. Test Conditions are derived from
 - a) Test Design
 - b) Test Cases
 - c) Test Data
 - d) Specifications
2. Test driver design is used for
 - a) Finding faults
 - b) finding errors
 - c) finding failures
 - d) finding mistakes
3. What is the Cyclomatic complexity for the following code?

```
IF A = 10 THEN
  IF B > C THEN
    A = B
  ELSE
    A = C
  ENDIF
ENDIF
Print A
Print B
Print C
```

 - a) 3
 - b) 5
 - c) 6
 - d) 8
4.is meant to prepare adequate foundations for successful and timely completion of the project.
 - a) Requirement analysis
 - b) Planning
 - c) Documentation
 - d) None
5. What is the significance of Integration testing?
6. To what extent does the criterion ensure that the requirement is fulfilled?
7. Explain the software system-related responsibilities of the executive in charge of software quality issues
8. What are all the tasks are carried out by SQA Unit?

PART B - (4 X16 = 64 marks)

09. (a) Distinguish Unit Level Fault Removal from Unit Level Certification based on Primary and Secondary Attributes (16)
- (OR)
- (b) Why do we say Software specifications are the basis for Test Oracle? Prove it with an example. (16)
10. (a) Write a program to compute the grade and compute their path function and path condition. (16)
- (OR)
- (b) Draw the Flowchart of the Sort Program and Compute its Cyclomatic Complexity. (16)
11. (a) (i) How do you characterize the Software testing tools? (8)
- (ii) Illustrate the Pros and Cons of Software Testing Tool. (8)
- (OR)
- (b) Identify the software testing tool which is used for Root-Cause Analysis. Justify your answer. (16)
12. (a) What are the three factor categories belonging to McCall's factor model? What are all the factors included in each of the categories? (16)
- (OR)
- (b) Write the Biography of SQA Components (16)