Paper Id: 214517 Roll No:

MCA
(SEM-V) THEORY EXAMINATION 2019-20
SOFTWARE TESTING

Time: 3 Hours ***Total Marks: 70***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a.	Discuss the objectives of Software Testing.
b.	What are the limitations of testing?
c.	If parents are [11111111] and [00000000] and k = 3, generate the offspring's (children) after the application of crossover operator.
d.	What are the steps involved in Test Case Design?
e.	Write name of any four type of testing which lies under System Testing category.
f.	Is unit testing possible or even desirable in all circumstances. Describe.
g.	What is class testing?

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a.	Differentiate between functional and non- functional requirements.
b.	What is the role of Quality Assurance in software development. How is it different from Quality Control.
c.	What are the activities involved in Test Plan Design?
d.	Evaluate and calculate Cyclomatic complexity from an activity diagram of a program(Binary Search). What does it signify?
e.	Outline the differences between regression testing and development testing. Do we perform regression testing before the release of the software?

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Demonstrate the functionality of genetic algorithm with the help of a flowchart.
(b)	Differentiate among Faults, Errors and Failures. Discuss the principles of software testing.

4. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Examine Decision table based testing and boundary value analysis with an example.
(b)	Explain the various steps of the regression testing process. Which step is the most important and why?

5. Attempt any *one* part of the following: 7 x 1 = 7

(a)	What is the cause-effect graphing technique? What are basic notations used in a cause effect graph?
(b)	Discuss Black-box testing and White-box testing in detail.

6. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Demonstrate various levels of testing? Which testing level is easy to test and why?
(b)	Discuss the Statement, Branch, Path, and condition coverage testing in detail.

7. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Illustrate and design test cases using form based testing of an online shopping application. make the necessary assumptions.
(b)	What is web testing? How Object Oriented Integration Testing is different from normal Integration testing.

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