

END TERM EXAMINATION

FIFTH SEMESTER [BCA] JANUARY-FEBRUARY 2023

Paper Code: BCA307

Subject: Software Testing

Time: 3 Hours

Maximum Marks: 75

Note: Attempt five questions in all including Q.No.1 which is compulsory. Select one question from each unit.

- Q1 Attempt **any five** of the following: (5x5=25)
- a) What is Scaffolding? Why do we use stubs and drivers during unit testing?
 - b) Explain the difference between Alpha and Beta Testing.
 - c) Differentiate between Black Box Testing and White Box Testing.
 - d) Discuss the following terms: Object, Class, Message, Inheritance and Polymorphism.
 - e) What is Slice based testing? How can it improve testing? Explain the concept with the help of an example.
 - f) Define Error, Fault, Failure, Incident and Test Suite.
 - g) Explain Extreme Testing in brief.

UNIT-I

- Q2 a) What are the principles of testing? Why is the psychology of the testing person important? What are the limitations of Software Testing? (6.5)
- b) Give an overview of Graph Theory. How is it useful in Testing? (6)

OR

- Q3 a) What is Software Testing? Is it possible to do complete testing? Why software testing is hard? (6.5)
- b) Explain in brief Code Inspection, Group Walk throughs and Peer Reviews. (6)

UNIT-II

- Q4 a) Let us consider an example of grading the students in an academic institute. Grading is done according to the following rules

| Marks Obtained | Grade |
|----------------|-------|
| 80-100 | O |
| 60-79 | A |
| 50-59 | B |
| 40-49 | C |
| 0-39 | F |

Generate test cases using Decision Table Based Testing and Cause Effect Graphing Technique. (6.5)

P.T.O

BCA-307
P/2

b) What is Path Testing? Explain with suitable example. (6)

OR

Q5 a) Consider the following points for an Employee Appraisal and Development System of a company:

| Points Earned by the Employee | |
|--------------------------------------|----------------------|
| 1 - 6 | Work hard to improve |
| 6 - 8 | Satisfactory |
| 8 - 10 | Good |
| 10 - 12 | Very Good |
| 12 - 15 | Outstanding |

Generate test cases using Decision Table Based Testing and Equivalence Class Testing Technique. (6.5)

b) How is Data Flow Testing performed? Explain define/use testing with the help of suitable example. (6)

UNIT-III

Q6 Define Regression testing. Is it necessary to perform? Explain regression testing with suitable example. Compare regression testing with development testing. (12.5)

OR

Q7 a) What are the various levels of testing? Explain the objectives of every level. Who should do testing at every level and why? (6.5)

b) What is debugging? Explain the debugging cycle and its role in testing process. (6)

UNIT-IV

Q8 What is object-oriented testing? How is it different from simple testing and GUI testing? Explain various issues involved in it with examples. (12.5)

OR

Q9 Explain in detail the various challenges and strategies involved in testing internet applications. (12.5)
