



PAPER ID-310327

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Subject Code: KCS076

Roll No:

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**BTECH**  
**(SEM VII) THEORY EXAMINATION 2023-24**  
**SOFTWARE TESTING**

**TIME: 3 HRS****M.MARKS: 100**

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

**SECTION A****1. Attempt all questions in brief.****2 x 10 = 20**

Qno.	Question	Marks
a.	Differentiate between Verification and Validation.	2
b.	Discuss the terms Reliability and Quality of the software.	2
c.	What is Boundary Value Analysis?	2
d.	Discuss Functional Testing.	2
e.	What is the importance of Regression Testing?	2
f.	Define Progressive Testing.	2
g.	Explain Software Test Plan.	2
h.	Differentiate between Static and Dynamic Testing Tools.	2
i.	Explain Post Deployment Testing.	2
j.	What is Gray Box Testing?	2

**SECTION B****2. Attempt any three of the following:****10 x 3 = 30**

a.	What are the goals of Software Testing? Explain. Also differentiate between Testing and Debugging.	10
b.	Draw the Control Flow Graph (CFG) and find the Cyclomatic Number of Bubble sort algorithm. Also design the test cases from independent paths.	10
c.	Differentiate between Regression Testing and Retesting.	10
d.	Describe Test Planning, Management Execution and Reporting along with their significance in Software Testing.	10
e.	Differentiate between Unit Testing in Procedural System and Object Oriented System.	10

**SECTION C****3. Attempt any one part of the following:****10 x 1 = 10**

a.	How defects are tracked in testing process? "Testing is a Process not a single phase in software development life cycle". Justify it.	10
b.	Discuss the terms Failure, Fault and Error. Explain software testing life cycle.	10



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**SOFTWARE TESTING**

**TIME: 3 HRS****M.MARKS: 100****4. Attempt any one part of the following:****10 x 1= 10**

a.	Describe the various reasons of using Black box testing. Design the equivalence class test cases for a program that reads two integer value pairs (m1,c1) and (m2,c2) defining two straight lines of the form $y = mx + c$ . the program computes the intersection point of the two straight lines and displays the point of intersection. (Hint: for Parallel lines ( $m1=m2$ and $c1 \neq c2$ ); for Intersection lines ( $m1 \neq m2$ ); for Coincident lines ( $m1=m2$ and $c1=c2$ ))	10
b.	Discuss need of White box testing. Explain Mutation Testing with a suitable example.	10

**5. Attempt any one part of the following:****10 x 1= 10**

a.	Define the objectives of Regression Testing. What are the Baseline and Delta version of software?	10
b.	Difference between Progressive versus Regression Testing.	10

**6. Attempt any one part of the following:**

a.	Define Execution Slice and Dynamic Slice techniques of Test Suite Prioritization with a suitable example.	10
b.	Explain Exploratory Testing and Iterative Testing in context of Adhoc Testing.	10

**7. Attempt any one part of the following:**

a.	What is Test Automation? Give the needs of Test Automation.	10
b.	What are the benefits of measurement in Software Testing? Give the names of some metrics used in Software Testing.	10