

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: BCA
BRANCH: BCA**

**SEMESTER: V/ADD
SESSION: MO/2025**

SUBJECT: CN309 SOFTWARE TESTING

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
-

		CO	BL
Q.1(a)	Differentiate between Error, Fault, and Failure in software testing.	[2]	1 1
Q.1(b)	Explain the role of verification and validation in improving software quality.	[3]	1 2
Q.2(a)	Write notes on cause effect graphing technique.	[2]	2 3
Q.2(b)	<pre>def check_number(x): if x > 0: print("Positive") elif x == 0: print("Zero") else: print("Negative") print("Done!")</pre> Draw DD Path of the given code.	[3]	2 4
Q.3(a)	What is Boundary Value Analysis?	[2]	2 1
Q.3(b)	Explain with one example how Equivalence Class Partitioning is applied in functional testing.	[3]	2 2
Q.4(a)	What is Cyclomatic Complexity?	[2]	2 3
Q.4(b)	<pre>def even_sum(n): total = 0 for i in range(1, n+1): if i % 2 == 0: total += i print(i) return total</pre> Draw the Control Flow Graph for the given code and calculate Cyclomatic Complexity.	[3]	2 4
Q.5(a)	What is Unit Testing?	[2]	3 1
Q.5(b)	Differentiate between Unit Testing and Integration Testing with suitable examples.	[3]	3 2,4

:::22/09/2025 :::M