

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

**CLASS: BCA
BRANCH: BCA**

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

SUBJECT:CN205 CONCEPTOF PROGRAMMING LANGUAGES

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q.1(a)	What are Structured and Non-Structured data types? What are the Pros and Cons of Structured data and What are the Pros and Cons of Non-Structured data	[5] 1	1
Q.1(b)	When dealing with very small or very large numbers, what steps would you take to improve the accuracy of the calculations?	[5] 2	2
Q.2(a)	What is Functional Programming? Explain classification of Functional Programming with suitable example. What are the Applications of Functional Programming?	[5] 3	2
Q.2(b)	Explain the different categories of sequence control. What are the differences between implicit and explicit sequence control in terms of arithmetic and non-arithmetic expressions.	[5] 4	3
Q.3(a)	What is Virtual Base Class? Explain with example.	[5] 2	3
Q.3(b)	Write a Program in JAVA to create a class called Fraction with data member numerator and denominator, take input(through command line argument) of two fractions and then add, subtract, multiply and divide, finally display the result in reduced them.	[5] 5	4
Q.4(a)	What is the difference between multiprocessing and multithreading? What is to be done to implement these in a Programming?	[5] 3	5
Q.4(b)	Define Exception handling in Programming? Explain its purpose to handle runtime errors without breaking its Application. Highlights its importance in application stability.	[5] 5	4
Q.5(a)	Explain Unification of Search Structure. Explain with suitable example of Forward and Backward Search Structure techniques.	[5] 3	2
Q.5(b)	Explain Parallelism of Hardware. What are the Advantages and Disadvantages of Hardware?	[5] 2	3

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