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

CLASS: BCA   SEMESTER : III
BRANCH: BCA   SESSION : MO/2024

SUBJECT: CN205 CONCEPT OF 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.

		CO	BL
Q.1(a)	What is 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
Q.1(b)	Write an iteration Program that will read a +ve integer value and determine the following: (i)　　if the integer is a prime number (ii)　　if the integer is a Fibonacci number.	[5]	2
Q.2(a)	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]	3
Q.2(b)	Write a program in C to Compute: $Sinx = x-x^3/3! + x^5/5! -x^7/7!\dots\dots\dots\dots$	[5]	4
Q.3(a)	What is Constructor? Explain different types of constructors with suitable examples.	[5]	5
Q.3(b)	What is Inheritance? What is its importance in programming contexts? Explain with suitable example multiple inheritance.	[5]	6
Q.4(a)	What is Logic Programming? What are the advantages of Logic programming? What is the Applications of Logic programming?	[5]	3
Q.4(b)	What is Functional Programming? Explain classification of Functional Programming with suitable example. What are the Applications of Functional Programming?	[5]	4
Q.5(a)	What is Concurrent Programming? What is its importance? Explain with suitable example of Concurrent Programming.	[5]	5
Q.5(b)	What is Polymorphism? Explain different types of Polymorphism using object-oriented programming. Write a suitable example of virtual Function and Operator Overloading.	[5]	4

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