



**K. K. Wagh Institute of Engineering Education & Research, Nashik**  
(An Autonomous Institute From A.Y. 2022-23)

	InSem Examination-IWinter 2023		
	Exam Seat No.:		
	Academic Year:2023-2024	Semester: III	
	Name of Programme: B.Tech Information Technology	Pattern:2022	
	Name of Course: Programming Paradigms and Methodology	Course Code:INT222003	
	Max. Marks:30	Duration:1 Hr.	

	<p><b>Instructions:</b> Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.</p> <ol style="list-style-type: none"><li>1. This question paper contains 02 page(s).</li><li>2. Answer to each new question is to be started on a new page.</li><li>3. Assume suitable data wherever required, but justify it.</li><li>4. Draw the neat labelled diagrams, wherever necessary.</li><li>5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question</li></ol>	
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**Question No. 1 Attempt following Question**

- a) Differentiate between scope and lifetime of a variable. (4) CO4

**OR**

- b) Differentiate between object oriented and procedural programming. (4) CO4

- c) If we get a **memory error** while running a program, what are possible reasons of such error? (5) CO4

**OR**

- d) Sketch and explain any five control flow statements in a programming language. (5) CO4

- e) Explain variable as a 6-tuple. (6) CO4

**OR**

- f) Explain different types of errors with suitable code in C language. (6) CO4

**Question No. 2 Attempt following Question**

- a) Differentiate between implicit and explicit sequence control. (4) CO2

**OR**

- b) For the given code, explain the variable values of x and y for pass-by-value parameter passing method.

```
void fun1(int x)
{
    int y=10;
    x=x+1;    //2
    y=y-1;
}
void main()
{
    int y=5;    //1
    fun1(y);
    cout << y;    //3
}
```

(4) CO2

- c) Memory blocks of sizes 10K, 30K, 25K, 40K are allocated in sequence. Block of 25K gets deallocated. Draw and explain the heap memory before and after these blocks allocation and compaction. (5) CO2

**OR**

- d) What is the problem in the below code segment? Explain.

```
int *p=new int;
delete p;
int i=*p;
```

(5) CO2

- e) Explain procedure and data abstraction with suitable code in C++ language. (6) CO2

**OR**

- f) Explain positional and keyword parameters for a subprogram with suitable code. (6) CO2