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**FINAL [MOCK] EXAM FALL SEMESTER 2024**

COURSE NAME:	Computer Programming	COURSE NUMBER:	4-CPR-11-386
EXAMINATION DATE:		EXAMINATION TIME:	
EXAMINATION DURATION:	50 mins	EXAM VERSION:	MOCK
ADDITIONAL MATERIALS ALLOWED TO USE:	Book(s), Notebook(s), Copybook(s) allowed, NOT paper notes. Any electronic device (laptop, smartphone, tablet, smart watch) not allowed.		

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**Please do not open the examination paper until directed to do so.**

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Your answer will be marked based on the following assessment criteria:

1.	Relevance of the answers to the question, proper examples provided	40%
2.	Creativity, variety, individuality towards the answer provided	20%
3.	Any extra attempt from student to fulfill the answers	15%
4.	Proper order of organization of the answer with clear written form	25%

Additional Feedback:

MARK (DO NOT FILL):

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STUDENT ID NUMBER

Name:

*Computer Programming* **MOCK**  
**Final examination 100 points**

Part 1 (25 points)

*1. Describe the pointer variable, how it is stored in memory (RAM), what characteristics it has in memory storage (4, points):*

*answer:*

*2. Describe characteristics of vector data structure, mention any 4 characteristic:*

*answer:*

*3. Explain recursive programming and try to give simple example:*

*answer:*

*4. Consider a Class Dish with attributes name : string, cost : int. Write C++ code snippet function below for overloading operator “+” The function should add the cost of both objects and return the summation of it (15, points):*

*answer below:*

Part 2 (35 points)

Mention any **5 functions of the vector data structure with description** and **give C++ example snippet code** of using it:

*code snippet 1:*

*code snippet 2:*

*code snippet 3:*

*code snippet 4:*

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*code snippet 5:*

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### Part 3 (40 points)

This is a integer data type two-dimensional array `int myArr[4][4]`; Write a *nested for loop to initialize* two dimensional array and another *nested for loop to print* the values. Please, *use new line* and *set width* components to make the output formatted. No need to mention main function, libraries, only provide answer as code snippet:

*answer C++ code snippet here:*