

National University of Computer and Emerging Sciences, Lahore Campus



Course:	Fundamentals of Computer Vision	Course Code:	CS-4059
Program:	BS(Data Science)	Semester:	Spring 2024
Duration:	-	Total Marks:	20
Due Date:	28-Mar-24	Weight	
Section:	B	Page(s):	1
Exam:	Quiz 1 Version 1	Roll No.	

Instruction/Notes:

- Read the Questions carefully. Make sure you have understood the requirements and expectations of the Questions.
- Any form of cheating or plagiarism will result in an award of ZERO marks.
- Crying is allowed but do it silently and please be sure to use your own tissue.

Question #1 [10 marks]

Explain what pointwise convolution is and how it differs from traditional convolutional layers in convolutional neural networks (CNNs). Provide an example of when pointwise convolution is commonly used and why it might be beneficial in that scenario.

Question #2 [5 marks]

Suppose you have a transpose convolutional layer with a kernel size of 4×4 , a stride of 2, and no padding. If the input to this layer is a feature map of size $8 \times 8 \times 32$, what would be the size of the output feature map?

Question #3 [5 marks]

What is Locality in convolutional neural networks (CNNs) ?