CSE-5368-001 Neural Networks
Fall 2023 Quiz 04

Time: 12 Minutes

1. Consider a convolutional neural network.
   Note: **Do NOT consider Biases**.

Input layer:

Input to this CNN are color images of size **100x64x3** with the **batch size = 50**

Note: Input image has **different horizontal and vertical** resolution.

Next layer is Conv2D layer:

Number of filters: **20**, filter size: **11x11**; stride: **3x3**; padding: **2x2**

Q1: What is the shape of the weight matrix for this layer?   **Q1:** _____

Q2: What is the shape of the output (tensor) of this layer?   **Q2:** _____

Next layer is Flatten layer:

Q3: What is the shape of the output (tensor) for this layer?   **Q3:** _____

Next layer is Dense layer:

Number of nodes: **40**

Q4: What is the shape of the weight matrix (tensor) for this layer?   **Q4:** _____

Q5: What is the shape of the output (tensor) for this layer?   **Q5:** _____