COMSATS University Islamabad (Lahore Campus)

√ Midterm Examination ☐Terminal Examination – Spring 2023

Course Title:	Computer Vision				Course Code:	CSC462 Credit	3(3.0)
Course Instructor/s:	Dr. Zeeshan Gillani				Programme	BCS, BSE	
Semester:	7th	Batch:	FA19, SP19	Section:	A,B,C	Date:	
Time Allowed:	90 Minutes				**Maximum Marks:**		50
Student's Name:					Reg.		

Important Instructions / Guidelines:

a. Start with prayer.
b. 90 Mins to solve the paper.
c. Attempt your own exam.

Question no 1: (CLO: <1>: Bloom Taxonomy Level: <Understanding>)

Explain with an example how image enhancement can potentially improve the computer vision pipeline. [10]

Question no 2: : (CLO: <2>: Bloom Taxonomy Level: <Applying>)

Object description is an integral part of the computer vision pipeline, describe in detail its importance and how it affects the results of classification and object detection. [15]

Question no 3: (CLO: <3>: Bloom Taxonomy Level: <Understanding>)

Apply the region-growing algorithm to the image given below. Initial seeds S1 and S2 are highlighted in yellow color. The threshold is T <=4. [10]

8	9	8	2	1
9	10	9	1	2
8	10	9	1	1
9	9	10	1	2
9	5	5	2	3

Question no 4: (CLO: <4>: Bloom Taxonomy Level: <Understanding>)

Design a pipeline to solve 3 class classification problems (sky, desert, and forest). Briefly discuss each stage outcome (techniques or filters used). You must use the ANN and justify its architecture and feature selection. [15]