Daffodil International University

Department of Computer Science and Engineering

Faculty of Science and Information Technology (FSIT)

Midterm Examination, Semester: Spring-2019

Course Code: CSE433 **Course Title: Digital Image Processing**

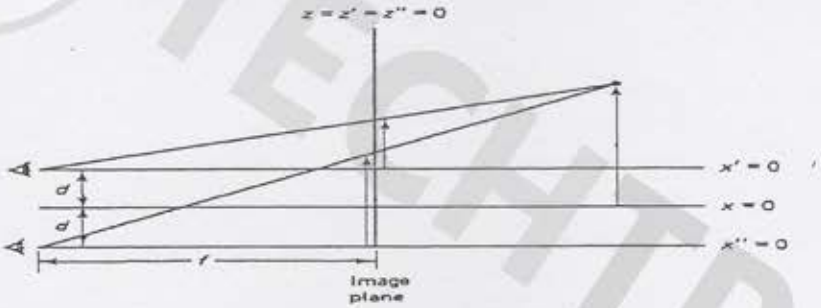
Section: ALL (Day) **Course Teacher: ALL**

Time: 1 Hour and 30 Minutes **Total Marks: 25**

Answer Three of the following questions. N.B: (Question-4) is mandatory to answer

1) (a) What do you mean by image processing? What is the significance of Reflectivity and luminance functions in an image? 3
(b) Explain briefly how an image is formed in Retina? 4
(c) Find the number of bits required to store a 512 X 300 image with 32 gray Levels. 1

2) (a) Briefly explain the procedures of how to convert an image into digital. 3
(b) What do you mean by 4-connected and 8-connected of pixel? How it can be represented? 3
(c) Explain the following vision model in image processing. 2



3) (a) What do you understand by HSV color coordinate system? Write an algorithm to convert an image from RGB color coordinates to HSV color coordinate system. 4
(b) What are the differences between Haar Classifier and LBP Classifier? 2
(c) Explain Briefly how to detect face using Haar Classifier? 2

4) (a) Write two example where and how a classifier is needed in image processing. 2
(b) Write a Python or Matlab code for transforming the following image from A into B. 3

(c) What do you mean by Morphological operation in an image? Write a code for correcting the break down portion of the following image using Morphological operation. 4