



Daffodil International University

Department of Computer Science and Engineering

Faculty of Science and Information Technology

Midterm Examination Semester: SPRING 2019

Course Code: CSE423 Course Title: Embedded Systems

Section: All Course Teacher Initial: FF, MIH, MJA, SSR

Time: 90 minutes

Full Marks: 25

1. What is Embedded Systems? What are the components of Embedded Systems? Describe it in details. [2+5]
2. You need to design a LED based Smart Lighting System for the upcoming Convocation Day of DIU which will be taking place on March, 2019. You have to design the system in such a way that –it will be visible to everyone only at evening time. [6]

Now, Write a sketch along with circuit diagram based on the above scenario just for only a segment. [Proper justification is required to obtain full credits]

3. What is PWM? Describe it's working principle with a relevant real life example [Proper description along with sketch is mandatory for the above scenario.] [6]
4. Let's say you are working on a project where you need to develop robotic arms to serve the purpose. Right now your task is to move the arm on a specific direction. For instance the arm will move to a specific angle for handshake with anyone or the arm might be moving to some other direction while the robot is walking. [6]

Write a sketch where you will be able to control two separate arms. [Please consider the fact that, the sequence of the arms while moving should be such that it looks like a natural arm]