



**Daffodil International University**  
**Department of Computer Science and Engineering**  
**Faculty of Science and Information Technology**  
**Midterm Examination Semester: Fall 2019**  
**Course Code: CSE423 Course Title: Embedded Systems**  
**Section: All Course Teacher Initial: All**

**Time: 90 minutes**

**Full Marks: 25**

[Answer All the Questions Given Below]

1. What do you understand by Embedded System? Explain the Benefits of Microprocessor in details. [1+5]
2. Write a simple sketch with diagram to individually light a Green & a Red LED on 10<sup>th</sup> & 12<sup>th</sup> pin respectively and the function will operate once and only for 3 seconds. [6]
3. Let's consider you have the following parts available: [6]
  - i) Arduino Uno Board
  - ii) A Uni-Directional Motor
  - iii) One LM35 sensor
  - iv) Couple of jumper cable
  - & v) USB Cable to connect the Uno Board

Now, write a Sketch that turns **ON** the Motor if the temperature sensor reading exceeds 30 degrees and it will remain off at any lower temperature than necessary to meet that requirement.

4. Suppose you want to design an automated toy car which will detect the obstacle and change its direction automatically. Now write a sketch for it. [7]