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Daffodil International University
Faculty of Science & Information Technology
Department of Software Engineering

Course code: SE 532 Course Title: Introduction to Robotics

Class Test-01, Summer'2026

Q1. A family buys a home-assistant robot to carry groceries from the car to the kitchen. One day, the father orders the robot to carry a heavy glass jar of pickles up a steep, wet staircase as fast as possible because dinner guests are arriving soon. The robot's balance sensors detect that it will likely slip on the wet steps and drop the jar right where the mother and her young child are standing at the bottom.

Which of Asimov's Laws of Robotics applies most strongly in this situation? Should the robot obey the order? **Defend** your answer using the laws. [CLO1-Level-] [Marks-5]

Q2. A farmer wants to prepare a smart monitoring system for his firm. To achieve this, he started with two sensors. One is to collect the temperature and humidity of the air for the crop field and another is to measure the moisture of the soil so that he can monitor the water level, fertilizer etc. automatically.

Recommend the sensors that are required for this job. What equipments are needed to construct this system and what should be the pin connection with the arduino? [CLO1-Level-5] [Marks-10]