

# Daffodil International University



Department of Computer Science and Engineering

Course Code: CSE112 Course Title: Computer Fundamentals

Section: 70\_M

Semester: Fall-2025

Quiz:01

Course Teacher: MHS

Name :

Student ID:

Time: 30 Minutes

[Answer All the following questions]

Full Marks: 15

**Q1.** You are working for an email service provider that wants to automatically detect and move spam emails into a separate folder. To achieve this, your team trains a computer model using thousands of past emails labeled as either "spam" or "not spam."

**Explain which type of machine learning is being applied in this case and describe why this method is suitable for the problem.**

[5]

**Q2.** In a robotics lab, an engineer is developing a robot that must learn to navigate through a room full of obstacles. The robot receives a positive score whenever it successfully avoids an obstacle and a negative score when it collides. Over time, it learns the best way to move through the room.

**Identify the type of machine learning being used here. Discuss the role of the "reward" in this learning process and how it helps the robot improve its performance.**

[5]

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**Q3.** A financial institution develops an AI system to approve or reject loan applications. After deployment, the bank realizes that the system rejects a higher percentage of applications from a particular ethnic group compared to others, even when their financial conditions are similar.  
**Discuss which ethical issue this situation represents. What could have caused this bias, and what steps should the organization take to ensure fairness in future AI systems?**

**[5]**