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# Daffodil International University

## Quiz 2 (Section: 44G)

**Course Title:** Computer Fundamental

**Course Code :** SE111

Date : 15-04-2025 Time : 45 minutes

| Question | Total 15 |
|---|---|
| 1. At Daffodil School, a unique tradition has been established: the annual tech workshop is planned only in **common years**. The IT department needs a program that checks whether a given year is a common year or not. Your task is to write an **algorithm** to help determine if a year is a **common year**, so the school can decide whether to organize the event. | 4 |
| 2. Sunrise Public School is building a **Smart Report Card System** that can automatically assign grades to students based on their exam scores (out of 100). The goal is to reduce manual effort and ensure consistent grading. determine **their grade** using the following criteria:<br>• Marks 90 or above → **Grade A**<br>• Marks 75 to 89 → **Grade B**<br>• Marks 50 to 74 → **Grade C**<br>• Marks below 50 → **Grade F**<br>Design a **flowchart** that:<br>a. Accepts the student's marks as input<br>b. Uses decision-making steps to compare the marks<br>c. Outputs the correct grade based on the rules above | 5 |
| 3. You've been hired as a network consultant for a company moving into two newly constructed office buildings. Each building has a different network setup, and your job is to analyze and identify the topologies used.<br>**Building A** has a setup where each device is directly connected to every other device. The network remains functional even if one device fails, as there are multiple paths for communication.<br>**Building B** uses a single **backbone cable** to which all devices are connected. Data travels along this cable, and if the main cable fails, the entire network goes down.<br>a. Which **topology** is used in Building A and Building B?<br>b. Discuss the **advantages and disadvantages** of each topology. | 3+3 |