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Daffodil International University

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Time: 40min Quiz-1 Semester: Fall 2025
Course Code: CSE112 Course Title: Computer Fundamentals

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1. Perform the following conversion
   - I. Convert $(725.45)_8$ to Hexadecimal (Base-16)
   - II. $(101101.01011)_2$ to Decimal (Base-10)
   - III. $(32431)_5$ to Octal (Base-8)

2.
   - I. Add $(2F9E)_{16}$ and $(B7CD)_{16}$
   - II. Multiply $(21323)_5 \times (42)_5$
   - III. Subtract $(74527)_8 - (3615)_8$

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Department of Computer Science and Engineering
Faculty of Science & Information Technology
Time: 40min Quiz-2 Semester: Fall 2025
Course Code: CSE112 Course Title: Computer Fundamentals

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1. A college wants to automate the student attendance process. Every day, a teacher enters a student's ID. The system should check if the ID is valid.If the ID is valid, the system should mark the student as "Present" and display a confirmation message.If the ID is invalid, it should display "Invalid ID – Try Again".After the status is recorded, the system should ask whether the teacher wants to enter another ID. If Yes, the process repeats; if No, the system ends.Draw a complete flowchart representing this attendance-marking process. 5

2. A small online retail shop experiences sudden spikes in traffic during discount sales. They need a system that can automatically handle increased demand without downtime and only pay for what they use. Identify and explain characteristics of this system shown in the scenario. 5

3. A startup software company is developing an online learning platform. They want full control over their sensitive student data but also need a flexible environment where they can test new features using cloud resources whenever needed. Their budget is limited, and they don't want to invest in buying new hardware.Based on the scenario, recommend the most suitable cloud deployment model(s) for the company. Explain your answer clearly with reasoning. 5