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Daffodil International University

Department of Computer Science and Engineering

Faculty of Science & Information Technology

Mid-term Examination **Semester: Summer 2022**

Course Colle: CSE 411

Course Title: Computer Architecture and Organization

Course Teacher: IK **Section: PC-B**

Time: 1.30 hours **Full Marks: 25**

Answer **all** of the following **four** questions. Figures in the right-hand margin indicate full marks.

1. a) Difference between human brain and computer? **2**

   b) Find out the unsigned integer, real, binary, octal, hexadecimal and 2's complement values of 689 denary number? **3**

2. a) What is ripple carry adder? Draw a ripple carry adder which could use to add two 5-bits binary numbers. **4**

   b) Write down the difference between 1st and 2nd generation computer system? **2**

3. a) Draw a full adder circuit using two half adder with the help of truth table and logical expression **4**

   b) Do the following number system conversion: **3**

      a) $(10101001)_2 = (?)_{10} (?)_{16}$

      b) $(345)_6 = (?)_9$

4. a) **Explain** your answer using ***a single sentence.***

      i) What is abacus? **1**

      ii) What is HDL? **1**

      iii) Define the terms: ASCII & VLSI **1**

      iv) Write down the name of three design levels of computer? **1**

      v) What is Flip-Flops? **1**

   b) What is interrupt? Write down the name of different types of interrupts? **9**

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