



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