Decimal and marks remarks

BMATH1101/BIE1123/BIE1124   ?   MATHS   FOR   COMPUTING/ BIT1113/BIT1114? DIGITAL DESIGN & FUNDAMENTALS

Department: Faculty of Information &CommunicationTechnologyCourse Name: BSEM/BMC/BICT/BBIT/BIT/BGT

Semester: 01

Commence Date: Week 6

Deadline Date: Week 8

Unit Controller / Examiner: Hossein Babaei

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Objective:

To provide student the basic discretemathematicsconcept that has applications in computerscience. To provide student expose in application of binary numbers.

Learning Outcome:

Upon completion of the assignment, student will be able to: Apply   binary   number   system. Apply the principle of mathematical induction.

ANSWER ALL THE QuestionS. [60 marks]

1.
Convert   each   binary   number   to   its   decimal   equivalent:
a)   111001012
b) 11011. 101012

[6 marks]

2.

Convert to its binary equivalent:

a) 421.390625_{10}

b) 231.625_{10}

[10 marks]

3.

Find the binary answer for the following :

a) $(254_8 \times 55_8) - (11000101_2 + 11010101_2) - FFA_{16} =$ b) $110.001_2 - 11.111_2$

c) $11.101_2 \times 11.01_2$

d) $100.0001_2 \div 10.1_2$

[10 marks]

4.

Find the following difference using complements:

a) $45636_{10} - 4539_{10}$

b) $11100111_2 - 11001100_2$

[6 marks]

5.

a) Add 673.624_8 with $74D.1F3_{16}$ in octal form.

b) Add $2A5C.EB_{16}$ with 4271.45_8 in hexadecimal form.

c) Encode the decimal number 345_{10} using 8-4-2-1 BCD code, d) Encode the numbers 254_{10}, -254_{10} and $+254_{10}$ to EBCDIC

codes   using

i)   Zoned   decimal   format,   ii)   Packed   decimal   format

[10 marks]

6.

a) Find the internal representation of 23510 and -53110 if the computer uses

a 32-bit memory location to store the number. b) Find the internal

representation   of   real   number

R = - 231. 312510 assuming computer uses 32-bits memory location to store

the   number.

c)   )   Find   the   internal   representation   of   real   number

R   =   378.   714310   assuming   computer   uses   32-bits   memory

location to store the number.

[25 marks]

SuBmission   information

Student who submits this assignment later than the deadline date stated

above will only get 0. 5%. You must submit the work with an assignment

cover page stapled together as submission.

Specific   Information

The   assignment   must   be   hand   written   with   NO   cancellation.

This assignment is an individual work and it contributes 15% assignment

coursework.

marking   criteria

The following is the marks deduction for this assignment:

Late submission = 0. 5% is given regardless of errors/mistakes. Not following question requirements = -0. 5% is given as long as student never follow any of the question requirements. Plagiarism = 0% is awarded immediately.

Let others copy your work = 0% is awarded immediately.
Off topic work = 0% is awarded immediately.

rules   and   regulations
You   are   to   complete   this   assignment   individually.
You   are   NOT   allowed   to   work   with   any   other   students.
You   must   write   all   the   step   and   the   solution.
It is reasonable to discuss with others possible general approaches to the given problems. You are NOT allowed to work together to get a detailed solution, to copy a solution, or to give away a solution. If there is too much collaboration from your common discussion by looking at the solutions, in such instances ofacademicdishonesty may result in you getting zero marks for this piece of assignment. Do NOT let others see your solution.

Do   NOT   e-mail   your   solution   to   anyone.
If someone cheats by using your work, you will be penalized.

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ASSESSMENT BMATH1101/BIE1123/BIE1124 MATHEMATICS FOR COMPUTING BIT1113/BIT1113   DIGITAL   DESIGN   &   FUNDAMENTALS INDIVIDUAL ASSIGNMENT

No

Criteria

Total

Marks

Marks

Remarks

Question	1	
6		
Question	2	
10		
Question	3	
10		
Question	4	
6		
Question	5	
10		
Question	6	
25		

Format/Punctuality

8

Neatness

5

Total

80

TOTAL MARKS: (/80)

:   _____   (15%)

Remarks   :

_____

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:   _____   (15%)