

KABARAK



UNIVERSITY

UNIVERSITY EXAMINATIONS

2009/2010 ACADEMIC YEAR

**FOR THE DEGREE OF BACHELOR OF BUSINESS MANAGEMENT
& INFORMATION TECHNOLOGY AND BACHELOR OF
TELECOMMUNICATION**

COURSE CODE: BMIT 116

**COURSE TITLE: INTRODUCTION TO INFORMATION
 TECHNOLOGY**

STREAM: Y1S1

DAY: TUESDAY

TIME: 2.00 – 5.00 P.M.

DATE: 16/03/2010

INSTRUCTIONS:

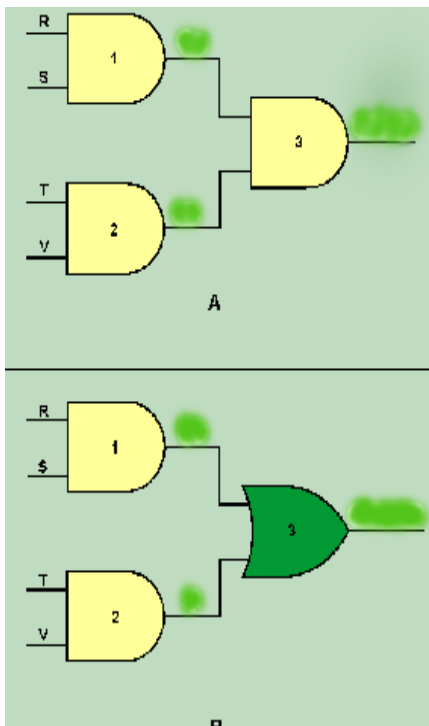
- i. Section A is compulsory and has 40 marks.
- ii. Attempt any TWO questions from Section B. Each question has 30 marks.

PLEASE TURN OVER

SECTION A

QUESTION 1 (40 MARKS)

- a) Being the system administrator at Kabarak University, list any five functions of the operating system. (5 marks)
- b) Using the table given at the last page. Write the binary coding for the word KABU in ASCII-7. How many bytes are required for this representation? (5 marks)
- c) Using the diagram below write the Boolean algebra equation used to draw it. (5 marks)



- d) You have been appointed as a network administrator; briefly explain the advantages of networks to newly employed staff. (5 marks)
- e) Explain in detail multitasking and multiprocessing operating system giving examples. (5 marks)
- f) As an internet expert identify and explain five advantages of the internet. (5 marks)
- g) What is email? Explain the different parts of an email address. (5 marks)
- h) Using a diagram, show how the basic elements of a computer system are interrelated. (5 marks)

SECTION B

QUESTION 2 (30 MARKS)

- a) As a computer user, define a computer and explain any three characteristics of computers. (4 marks)
- b) Find out the result of the following addition $00010011_2 + 00111110_2$ and $00011010_2 + 00001100_2$. (4 marks)
- c) Briefly explain the World Wide Web (WWW). (4 marks)
- d) Convert the BCD number 00111000011 and 01100111.0100 to their decimal equivalent. (4 marks)
- e) Draw the logic symbol and the truth table of the NOR gate. (4 marks)
- f) Networks are good and at the same time bad. List any four disadvantages of networks. (4 marks)
- g) Convert 37.12_8 to its binary equivalent, do not use the shortcut method. (4 marks)
- h) Explain the following terms as used in computers: (i) Bus. (ii) Bays (2 marks)

QUESTION 3 (30 MARKS)

- a) As a network engineer explain the difference between C.A.N and P.A.N. (4 marks)
- b) Draw the circuit diagram using the logic gates of the following Boolean algebra. $S = \bar{A}B + A\bar{B}$. (4 marks)
- c) With the aid of a diagram explain the difference between the star topology and the ring topology. (4 marks)
- d) Briefly explain the non-positional number systems giving examples. (4 marks)
- e) Convert $(37.12)_{16}$ to its decimal equivalent do not use the shortcut method. (4 marks)
- f) Briefly explain the hard copy and soft copy output devices giving example of each. (4 marks)
- g) Calculate the following binary arithmetic $00011010 + 00001100$ and $00010011 + 00111110$. (4 marks)
- h) As an administrator most of the time you are involved in uploading and downloading of files. Highlight four objectives of any file transfer protocol? (2 marks)

QUESTION 4 (30 MARKS)

- a) Briefly explain the differences between super computers and micro computers. (4 marks)
- b) Draw a diagram showing how five computers may be networked together, naming the topology of the network. (4 marks)
- c) Calculate the following binary division $101010 \div 110$. (4 marks)
- d) Explain the different types of computer by purpose. (4 marks)
- e) Convert the decimal number 5139_{10} to BCD equivalent. (4 marks)
- f) Explain the pre-formatted text tag as used in HTML. (4 marks)
- g) Being the chief technician of Zain, Explain in detail the four major types of instruction given by the control unit. (4 marks)
- h) Briefly explain the difference between Intranet and extranet. (2 marks)

QUESTION 5 (30 MARKS)

- a) A network without hardware components may be considered dead. What is the difference between a switch and a router? (4 marks)
- b) Write a HTML code to display the table information below on any web browser. (4 marks)

NAME	AGE	SEX
MIKE	22	MALE
JOAN	23	FEMALE

- c) Using the table below, write the hexadecimal coding for the word SKY in ASCII-7. How many bytes are required for this representation? (4 marks)
- d) Name and explain any three types of computer hardware components.(4 marks)
- e) Briefly explain specialty software and productivity software. (4 marks)
- f) Do the following binary Multiplication 10110×1101 . (4 marks)
- g) Differentiate between hardware and software. Give two example of each. (4 marks)

- h) Many people use the computer but may not understand much about the same.
How would you differentiate between Middleware and Firmware in computer software? (2 marks)

CHARACTER	ASCII-7 CODE		HEXADECIMAL EQUIVALENT
	ZONE	DIGIT	
0	011	0000	
1	011	0001	
2	011	0010	
3	011	0011	
4	011	0100	
5	011	0101	
6	011	0110	
7	011	0111	
8	011	1000	
9	011	1001	
A	100	0001	
B	100	0010	
C	100	0011	
D	100	0100	
E	100	0101	
F	100	0110	
G	100	0111	
H	100	1000	
I	100	1001	
J	100	1010	
K	100	1011	
L	100	1100	
M	100	1101	
N	100	1110	
O	100	1111	
P	101	0000	
Q	101	0001	
R	101	0010	
S	101	0011	
T	101	0100	
U	101	0101	
V	101	0110	
W	101	0111	
X	101	1000	
Y	101	1001	

Z	101	1010	
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