

University of Liberal Arts Bangladesh (ULAB)
MID TERM EXAMINATION
Spring 2020



Course No:	101
Course Name:	CSE

Students Name:	Atia Ibnat
Students ID No:	201012079

Date of examination:	23rd March, 2020
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Obtained	
Total	

**Signature of the
Examiner**

Department of Computer Science and Engineering
University of Liberal Arts Bangladesh
Mid Term Examination
Semester – Spring 2020
Course Title: Introduction to Computer Studies
Course Code: CSE 101 (Sec: 4) Duration: 1:00
Hours

PLEASE ANSWER ALL QUESTIONS.

Total 20 Marks

QUESTION 1

7 marks

Perform the following binary operations:

- a) $(1100000)_2 - (1011111)_2$
- b) $(10111)_2 \div (101)_2$
- c) $(1100)_2 \times (1101)_2$

QUESTION 2

7 marks

Write Short notes on the following topics. Also provide at least one example for each of them:

- a) Egocentric and Exocentric environments
- b) Quick Response (QR) Code
- c) Ergonomics

QUESTION 3

4 marks

Identify and categorized various entities of the following Computer Based Systems (CBS) into software, hardware & user.

- a) Facebook
- b) Retail Software

QUESTION 4

2 marks

Write the impacts and applications of computers in education and healthcare.

The answers to the above questions are given below:

Question 1:
Answer

Answers

$$\begin{array}{r} 1.a) \ 11000000 \\ - \ 10111111 \\ \hline 00000001 \end{array}$$

$$\begin{array}{r} c) \ 1100 \\ \times \ 1101 \\ \hline 1100 \\ 0000x \\ 1100x \\ 1100x \\ \hline 10011100 \end{array}$$

$$\begin{array}{r} b) \ 101 \overline{) 10111 (00100} \\ \underline{- 0} \\ 10 \\ \underline{- 0} \\ 101 \\ \underline{- 101} \\ 01 \\ \underline{0} \\ 11 \\ \underline{- 0} \\ 011 \end{array}$$

Question 2:

Answer

2.a) Egocentric and Exocentric environments

* Egocentric - Having control over everything and not being able to distinguish between right and wrong with the help of technology in a virtual world.

Example - Virtual reality display

* Exocentric - Unlike egocentric environment, user does not have full control in a 3D view and cannot interact.

Example - 3D sunglasses

b) Quick Response (QR) Code - a tag with square patterns in black and white to locate webs.

Example - QR code to find people or information about products.

c) Ergonomics - arrangements to make objects/machines friendly to users.

Example - a workplace providing computers that function in the user's preference with comfortable desks

Question 3:

Answer

3. a) Facebook -

- i) Software - Application (Facebook itself)
- ii) Hardware - Mobile devices / Computers.
- iii) User - Facebook users.

b) Retail software -

- i) Software - Application
- ii) Hardware - Computers
- iii) User - The one who buys and operates.

Question 4:

Answer

4. Education:

With the help of computers we can access Google Classroom which is a website that provides necessary lectures and informations from anywhere.

- Healthcare:

Ultrasonograms use computers to identify any foreign object in a patient example- tumours.