University of Liberal Arts Bangladesh (ULAB)

MID TERM EXAMINATION
Spring 2020

Course No:	CSE 101 (Sec: 4)
Course Title:	Introduction to Computer Studies

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Obtained	20
Total	25

Signature of the Examiner

Answer to the Question no. 1

a) $(1100000)_2 - (1011111)_2$

$\Rightarrow$
```
  1100000
  1011111
  ─────────
  0000001
```

∴ Answer: 1

b) $(10111)_2 \div (101)_2$

Now,
```
101) 10111 (00100
     -01
     ─────
      10
     - 0
     ─────
      101
     -101
     ─────
       01
      - 0
     ─────
       11
      - 0
     ─────
       11
```

∴ Answer: 00100

c) $(1100)_2 \times (1101)_2$

Noco,

```
        1100
      × 1101
      ───────
        1100
       0000
      1100
     1100
   ──────────
   10011100
```

Answer to the Question no. 2

a) Egocentric environment:

Egocentric environment is a virtual environment in which the user is fully engaged in the virtual virtual Reality (VR). Head-mounted display (HMD) and Virtual Retina Display (VRD) is used in this environment where the user experiences computer generated events in a realistic way.

⊞ Exocentric environment :

Here, The user gets a window view where the computer generated environment can only be witnessed on screen. User cannot interact with the environment like Egocentric. We can say watching television or movies in theaters can be Exocentric environments where user cannot interact.

b) Quick Response (QR) code :

Quick Response Codes or QR codes are specific codes which are Readable by machines consisting of an array of black and white squares. A lot information and URLs can be stored in a QR code which can be scanned by smart pok phones or QR scanners. It's generally small and dust and dirt resistant.

Example : QR codes are used to give coupons of discount or wifi passwords for many restaurants.

PTO

c) Ergonomics :

Ergonomics is basically the scientific discipline concerned with the understanding of the interaction among humans and other elements of system. It is about the well being of the user according to the set up of the computer so that working daily doesn't cause any severe joint or muscle pain. It should maintain the stress level of the user to minimum. There are designed chairs and desks to reduce stress level on the body.

Answer to Question no. 3:

a) **Facebook:** Facebook is the biggest social media platform in the world created by Mark Zuckerberg

⊞ Software: Facebook APP is needed to use facebook on any browser to log in to it's server/webpage.

⊞ Hardware: A computer or a smart phone or tablet can be used to access Facebook.

⊞ User: Anyone who has a facebook account can login to facebook using their email and password.

P.T.O

b) <u>Retail Software</u>: Retail softwares are certain softwares used for e-commerce or business.

⊡ Software: On-premise

⊞ Hardware: A computer or a sensor where on-premise can be installed as an e-commerce software.

⊞ User: Someone or a group who handles manual updates and fixes issues.

Answer to Question no. 4:

The impacts and applications of computers in education and health care:

⊞ Education: Computers have revolutionized the whole world including the sector of education. We can gain knowledge easier and anytime because of it. The current situation is an example. Because of the Novel Coronavirus, all classes ~~have and~~ institution have been closed and ~~since we~~ we are attending online classes.

⊞ Health care: Because of computers, many research ~~research~~ and invention can be done in the sector of health care. And because of computer we can gain knowledge ~~about~~ health as well. We are maintaining safety now from COVID-19 now gaining knowledge from it. So, we can say computers in healthcare are revolutionary as well.