University of Liberal Arts Bangladesh (ULAB)

FINAL EXAMINATION
Spring 2020

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

Students Name:	Afra Anjum
Students ID No:	201013053

Date of examination:	22.04.2020

Obtained	11
Total	25

Signature of the Examiner

Answer the question NO : 01 :

The application of computer in communication :

The application of computer in communication is innumerable . The whole world is connected through computer . It has opened the door of a new era in the communication sector. Email is the first invention. Later on chatting and video conferencing through multiple apps have gained popularity. There are various types of social media sight like face book, twitter snapchat Instagram etc which are all used and controlled through computer. Now a days social influencing and blogging are attracting the young generation . They can share their thinking , ideas, in blog sites using computer. Most of the people choose their career in youtube . Youtube is the storehouse of knowledge and news all over the world. Most of the news channels cover their live program in youtube.

Application of computer in military :

Computer also deals with the military activities . It's very essential in designing and controlling the nuclear weapons like missile . It's important to maintain different frequencies to ensure the security of the batelion . It also helps to maintain the communication between the soldiers at the time of fighting. It also helps a team head or a squardrent leader to contact and give all the information correctly through communication. It is also used to detect the enemy and make effective plans to bit them . It is very important to control smart weapons like radar and satellite . Now a days computer is very important in communication and also as well as military sector .

Answer the question no : 02

Abacus : An abacus is an instrument which was mainly used for calculating the numbers . It's a manual aid of calculating that consists of beads or disks that can be moved up and down on a series of sticks and string in a wooden frame . It doesn't calculate itself . It's simply a device for helping a human being to calculate by remembering what has been counted . It showed the path of inventing computer . The abacus in still used in China and Japan .

The Altair is a micro computer designed in 1974 by MITS and based on the intel 8800 CPU . It had huge impact on people and also on computers. It gave ideas to make better and advance computer . The Altair 8800 also was responsible for the rise of Microsoft as an industry giant . The Macintosh was the first widely sold personal computer designed , manufactured and sold by Apple Inc. since January 1984. Macintosh was the first computer with a graphical user face and a mouse .

The Altair was nothing like a computer today. It was only able to use tape for storage and computer users were able to flip switches on the panels , writing their own programs in machine language . It was designed like an expandable system plus it had no key board.

If we give attention to the changing point of them we can see ,

Mouse : Macintosh introduced the mouse first in the history of computer technology . It was a grand breaking invention which has made it very easy for the users to do works in computer .

Personal computer (PC) : The Altair 8800 and Macintosh revolutionized the computing world by allowing common people to have their own personal computer to use.

Macintosh introduced graphical user interface to mass people which is a using item such as windows , icons and menus , used by most modern operating systems.

Answer the question no : 05:

Ergonomics : Computer ergonomics is the practice of fittings to set up of the computers and workspace to fit the users and the users works need in order to minimize physical stress on the computer user. It is about designing for people , defined as the science of fitting a workplace according to the needs of an user, ergonomics aims to increase efficient and productivity and reduce uncomfortable situation. Computer ergonomics work to alleviate the following conditions that can result from a lot time on the computer.

Blurred vision or headaches , carpal tunnel syndrome , neck and brain strain , posture .

I would suggest a user to follow the following tasks while using computer to avoid (RSI)

a. Office hardware suggestions: Office chairs should have
   1. Adjustable armrests
   2. Height
   3. Armrests
   4. Lower back support
b. Desk hardware suggestion : Desk should have :
1. A keyboard tray
2. Keep hands at keyboard eye
3. Place the monitor at eye level.

Answer the question no 6 :

a. Egocentric environment : Egocentric environment is a digital technology which enables someone to experience and feel the artificial environment as a real world .

Example : HMD : Head mounted display

VRD : Virtual retinal display

Exocentric environment : It's a kind of technology that human body movement is not controlled by device and mainly its computer generated. It's a screen view like we can watch 3D movies but we can't feel the 3D environment .

Example : Projector , 3D Cineplex .

b. Pull technology : Pull technology is a style of network communication where the initial request for data originates from the client , and then is responded to by the server . The reverse is known as push technology where the server pushes data to clients .

Example : Downloading web pages via web browser

Entering URL and a web browser to go to a certain website .

Push technology : Push technology is an internet communication system in which the transaction request is generated by the central web server or publisher . Push technology is the opposite of pull technology where the information transmission request is made by the clients and receivers .This phenomenon is used to describe the preplanned news , whether or other selected information that is updated on a periodic basis on user's desktop interface.

c. Software as a service (SAAS) : SAAS is a software distribution model in which a 3rd party providers hosts applications and makes them available to software delivery that allows data to be accessed from any device with an internet connection and a web browser . Such as google apps , drop box etc.

d. Virtual reality : Virtual reality is an artificial environment which is created by software. Here people can experience the feel of real life through virtual world. It is presented to the use suspends belief and accept as a real environment . User computer generated 3D images to create the illusion of interaction in a real world environment . Such as . VR box, Military fight simulations , Entertainment in games and theatres .

Task 3:-

a) $(DEAD)_{16} = (57005)_8$

$\therefore 13 \times 16^3 = 53248$

$14 \times 16^2 = 3584$

$10 \times 16^1 = 160$

$13 \times 16 = 13$

_____

57005

$\therefore (DEAD)_{16} = (57005)_8$ (Ans)

We know,

$A = 10$

$B = 11$

$C = 12$

$D = 13$

$E = 14$

b] $(12.34)_{10} = (1100.0101011000)_2$

$(12)_{10} = 12 \div 2 = 6 \qquad \Rightarrow 0$
$\qquad\qquad 6 \div 2 = 3 \qquad \Rightarrow 0$
$\qquad\qquad 3 \div 2 = 1 \qquad \Rightarrow 1$
$\qquad\qquad 1 \div 2 = 0 \qquad \Rightarrow 1$ $\Big] \rightarrow$ carry

$(0.34)_{10} = 0.34 \times 2 = 0.68 \Rightarrow 0$
$\qquad\qquad 0.68 \times 2 = 1.36 \Rightarrow 1$
$\qquad\qquad 0.36 \times 2 = 0.72 \Rightarrow 0$
$\qquad\qquad 0.72 \times 2 = 1.44 \Rightarrow 1$
$\qquad\qquad 0.44 \times 2 = 0.88 \Rightarrow 0$
$\qquad\qquad 0.88 \times 2 = 1.76 \Rightarrow 1$
$\qquad\qquad 0.16 \times 2 = 1.52 \Rightarrow 1$ $\rightarrow$ carry
$\qquad\qquad 0.52 \times 2 = 1.04 \Rightarrow 1$
$\qquad\qquad 0.04 \times 2 = 0.08 \Rightarrow 0$
$\qquad\qquad 0.08 \times 2 = 0.16 \Rightarrow 0$
$\qquad\qquad 0.16 \times 2 = 0.32 \Rightarrow 0$

$\therefore (12.34)_{10} = (1100.0101011000)_2$ (Ans)

Task 4 :-

a) $(1001)_2 + (1011)_2 = (10100)_2$

$$\begin{array}{r} 1001 \\ (+)\ 1011 \\ \hline 10100 \end{array}$$

$\therefore (1001)_2 + (1011)_2 = (10100)_2$ (Ans)

b) $(11000)_2 - (10111)_2 = (1)_2$

$$\begin{array}{r} 11000 \\ (-)\ 10111 \\ \hline 00001 \end{array}$$

$\therefore (11000)_2 - (10111)_2 = (1)_2$ Ans