**Course:** Computer Skills/ Applications  **Program:BS(DT/RAD/MIC)**

**Semester:** 4th **Total Marks:** 30

**Instructor:** Zakir Rahim **Time**: 4 Hours

Due Date: 21 August, 2020. (Name: owais Anwar. Id: 15802)

**Instructions:**

* Students are required to solve the provided assignment and upload it on SIC within specified time.
* The solutions must be type-written.
* The solutions must be uploaded either in Ms-Word format or pdf format.
* Students are required to save the file with their name and student id. For example ahmad\_12345.

Q1. (a) In your opinion what are the 3 most important characteristics of computers, Explain each characteristic?

Ans:There are following important characteristics of computer

speed : computer is a fast device and performs the amount of works in 2 seconds. Then a human being performing that work is month or year.

Accuracy: computer is very accurate. It never results in kinds of error in the calculation

Storage capacity : A computer can store and resell any amount of information because of its secondary storage capacity.

(5)

(b) Write key characteristics of fourth generation of computers? (5)

Ans:1) The fourth generation computers have microprocessor-based systems. It uses VLSI (Very Large Scale Integrated) circuits.    
  
2) They are the cheapest among all the computer generation.    
  
3) The speed, accuracy and reliability of the computers were improved in fourth generation computers.    
  
4) Many high-level languages were developed in the fourth generation such as COBOL, FORTRAN, BASIC, PASCAL and C language.    
  
5) A Further refinement of input/output devices was developed.    
  
6) Networking between the systems was developed in fourth generation computer.

Q2. (a)Discuss the importance of Arithmetic logic unit and Control unit of a computer system?

An Arithmetic logic unit (ALU) is a digital circuit used to perform Arithmetic and logic operations. It represents the fundamental building block of the

control processing unit(CPU) of a computer. Modern CPUs contain very powerful and complex ALUs. In addition to ALUs, modern CPUs contain a control unit (CU).

(5)

(b)Write a detailed note on importance of RAM (Random Access Memory)? (5)

Random Access Memory (RAM) is a type of computer data storage. A RAM device makes it possible to access data in random order, which makes it very fast to find a specific piece of information. Certain other types of storage are not random-access. For example, a hard disk drive and a CD will read and write data in a predetermined order. The mechanical design of these devices prescribes that data access is consecutive. This means that the time it takes to find a specific piece of information can vary greatly depending on where it is located on the disk.

RAM devices are used in computer systems as the main memory. RAM is considered volatile memory , which means that the stored information is lost when there is no power. So, RAM is used by the central processing unit (CPU) when a computer is running to store information that it needs to be used very quickly, but it does not store any information permanently.

Q3. Write a detailed note on Basic Organization of a computer System along with the functions of each part. (10)

Ans: There are five main hardware components in a computer system input processing storage output and communication devices. Are devices used for entering data or instructions to the centra processing unit.

Basic organisation of computer system

Storage unit

(Secondary Storage)

Program and Data Input unit Output unit information (results)

( primary storage)

(Control unit)

Arithmetic

Logic unit

Control processing unit (cpu)

An input of a computer system performs the following function

1.It accepts (or reads) instructions and data from outside  world

2.It converts these instructions and data in computer  acceptable form

3.It supplies the converted instructions and data to the  computer system for further processing

An output unit of a computer system performs the following functions

1.It accepts the results produced by the computer, which  are in coded form and hence, cannot be easily  understood by us

2.It converts these coded results to human acceptable  (readable) form

3.It supplies the converted results to outside world

The storage unit of a computer system holds (or stores) the following. 1.Data and instructions required for processing (received  from input devices)

2.Intermediate results of processing

3.Final results of processing, before they are released to  an output device

Two types of storage:

 Primary storage

Usedto hold running program instructions    Used to hold data, intermediate results, and  results of ongoing processing of job(s)

Fast in operation

 Small Capacity

Expensive

Volatile (looses data on power dissipation)

Secondary storage

Used to hold stored program instructions

Used to hold data and information of storedjobs

Slower than primary storage

Large Capacity

Lot cheaper that primary storage

Retains data even without power