**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

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DEPARTMENT: BS DT

**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? (5)

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

Q2. (a)Discuss the importance of Arithmetic logic unit and Control unit of a computer system? (5)

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

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

***QUESTION***

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

***ANS***

**CHARACTERISTICS OF COMPUTER**

**1’ AUTOMATIC**

GIVEN A JOB, COMPUTER CAN WORK ON IT AUTOMATICALLY WITHOUT HUMAN INTERVANTIONS

***2)SPEED***

Computer can perform data processing jobs very fast , usually measured in microsecond (10 -6 ),nanoseconds(10 -9 ) and picoseconds(10 -12).

**3) Acuracy:**

Accuracy of a computer is consistently high and the degree is its accuracy depends upon its design .computer errors cause due to incorrect input data or unreliable program are often referred to as Garbage-In-Garbage-Out (GIGO) .

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

Ans :

**( FOURTH GENERATION 1975-1989).**

**KEY HARDWARE TECHNOLOGY.**

* Ics with vlsi technology
* Spread of high speed computer networks
* Personal computer

**KEY SOFTWARE TECHNOLGY**

* Object oriented desingn and programming
* Multiprocessing OS with current programming
* PC network based and super computing application .

**KEY CHARACTERISTICS**

* Small effordible and reliable and easy to use PC
* Totally general perpose machine
* Easier to produce commercial

**SOME REP SYSTEMS**

* Apple to
* VAX 9000
* TRS- 80
* CRAY-1
* CRAY-2
* CRAY-X/MP

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

**ARTHEMATIC LOGIC UNIT (ALU)**

Arthematic logic unit of computer system is the place where the actual execution of instruction takes place during processing operation

**CONTROL UNIT (CU)**

Control unit of a control system manges and coordinate the operation of all other components of the computer system

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

**TYPES OF MAIN MEMORY**

1. Random only read memory (RAM)
2. Read only memory

**Random Access Memory (RAM)**

* Volatile in nature
* IN case of power interruption all the data in ram is lost
* RAM can only store data as long as computer is ON.

Types of Main memory

Ram chips are of two types

1. Dynamic RAM
2. Statics RAM

**Dynamic RAM**

* Uses an external circuitry to periodically “regenerate “ or refresh storage charge to retain the stored data .

**Static RAM**

* Does not need any special regenerator circuit to retain the stored data .
* Faster contlier and consumes more power .

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

**Computer**

A computer is an electronic device which accept and stores data input processing the data input and generates the output in required format.

**Basic organization of computer system**

**Input**

* It accepts or reads instruction and data from outside world
* I converts these instruction and data in computer acceptable form
* It supplies the converted instruction and data to the computer system for further processing

**Output unit**

* It accepts the results produced by the computer whish are in coded form and hence cannot be easily understood by us
* It converts these coded results to human acceptable (readable) form
* It supplies the converted results to outside

**ARTHEMATIC LOGIC UNIT (ALU)**

* Arthematic logic unit of computer system is the place where the actual execution of instruction takes place during processing operation

**CONTROL UNIT (CU)**

* Control unit of a control system manages and coordinate the operation of all other components of the computer system

**CENTRAL PROCESSING UNIT (CPU)**

* It is the brain of a computer system.
* It is responsible for controlling the operation of all other units of a computer system
* It supplies the converted results to out side word

**Storage unit**

* Data and instruction required for processing (received from input devices)
* Intermediate results of processing
* Final results of processing before they are released to an output device

**Two types of storage**

* Primary storage
* Secondary storage

**Primary storage:**

Use to hold running program instruction used to hold data intermediate results and results of ongoing processing of jobs

Fast in operation

Small capacity

Expensive

Volatile (looses data on power dissipation )

**Secondary storage**

Used to hold store program instructions used to hold data and information of stored jobs slower than primary storage large capacity lot cheaper that primary storage retain data even without power.