

King Saud University

College of Applied Medical Science

Radiology department

Rad 454

1st mid term exam

Day: Sunday

Date: 14/10/2012

*Student Name:……………………………. ID #:…………………………Level:……*

|  |  |
| --- | --- |
| Total  mark |  |
| 15 |

**First question: choose the correct answer : (4 marks)**

1. After data is processed, results are sent to an \_\_\_\_\_\_\_\_\_device in the form of hard or soft copy.

A. input

B. processing

C. output

1. The most important DAC characteristic is \_\_\_\_\_\_\_\_ :

A. size

B. resolution

C. cost

3- \_\_\_\_\_\_\_\_ is provides for temporary storage of data and programs that would be lost if the computer loses power.

A. RAM

B. ROM

C. OS

4- The display image on the screen is thus composed of \_\_\_\_\_\_\_\_\_ :

A. Bits

B. Dots

C. pixels

**Second question: True or False statement : (2 marks)**

1-Bit is the smallest unit of data that a computer uses (microprocessors) . ( T )

2- Gateway is device to interconnect SIMILAR protocols and servers. ( F )

3- CPU it is the brain of the computer . ( T )

4-Digital computers are operate on continuous physical quantities. ( F )

**Third question: Fill the blanks with appropriate word/s:**

**(3 marks)**

1. --software--------- the programs that run the computer.
2. -------input hardware---- enable users to get data into the computer for processing .
3. Most important characteristics of computers are ---speed------ and -------power----- .
4. --Band rate-------- refers to the number of discrete signal elements (bands) transmitted per sec.
5. LAN is ---local area network-------------------------------

6- **----**node**--------** is anything connected to the network, usually a computer, but it could be a printer or a scanner

**Fourth question: List three of : (2 marks)**

1. ADC essential parts:

**-**sampler

-quantizer

-coder

**2-** Medium types:

**-**conductive

-electromagnatic

-light

-wireless

**Fifth question: Answer the following : (2 marks)**

**Today, computers plays major role in radiology ,talk about imaging applications in radiology .**

They are those modalities in which the information acquired from the patient is subjected to computer processing. This involves digital image processing techniques to produce digital images. These images can be stored or displayed.

Several methods for creating images: computed radiography, digital fluroscopy, computed tomography and magnetic resonance imaging.

**Sixth question: Define 2 only : (2 marks)**

**-Topology:**

The way each node is physically connected to the network

**-DICOM :**

is the imaging communication protocol for PACs.

- **HL-7 :**

standard application protocol most used with HIS and RIS.

**Good luck ...**

**Alanoud Al Saleh**