SUB : MANAGEMENT INFORMATION SYSTEM

CODE : SWE 329

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QUES 1 : What do you mean by IT infrastructure?Explain with a real life example.

ANS :

IT infrastructure refers to the composite hardware, software,data management, network resources and services required for the existence, operation and management of an enterprise IT environment.

It allows an organization to deliver IT solutions and services to its employees, partners and customers.

It has seven main Components.Such as:

- Computer Hardware
- Computer Software
- Data management services
- System Integration services
- Telecommunication / Networking

- Enterprise Software Application
- Internet Platform

The uses of cloud computing is an real life example of IT infrastructure.Cloud computing is an infrastructure and software model that enables ubiquitous access to shared pools of storage, networks, servers, and applications.Education in cloud computing is increasingly adopting advanced technology because students already use it.Modernize classroom,educators and other facilities have introduced in e-learning platform.Now student can build presentation and submit them.They can attend in a classroom in real time and interact with the educators all on the cloud.

QUES 2 : Compare moore's law with law of mass digital storage.

ANS :

Moore's Law refers that the number of components on a chip with the smallest manufacturing costs per component had doubled each year.

On the other hand the law of mass digital storage states that the amount of data is roughly doubling every year.

Moore's Law interpreted to say that the power of microprocessors doubles every 18 months.This law helps address the area of nanotechnology.

According to the law of mass digital storage the cost of storing data is falling at an exponential rate of 100 percent a year.

QUES 3 : Compare Database,file,record and field.

ANS :

Database: Database is a group of related files.

File: File is a group of same type of records.

Record: Record is group of related fields.

Field: Field is group of characters as word or number.
- •Describes an **Entity**(person, place, thing on which we store information).
- •**Attribute:** Each characteristic, or quality, describing entity.

QUES 4 : Explain relational Database with an specific example.

ANS :

A *relational database* is a type of database that stores and provides access to data points that are related to one another.In relational database data is represented as two-dimensional tables.Each table contains data on entity and attributes.Relational table made of :

Rows (tuples): It contains records for different entities.

Columns(Fields): It represents attribute for entity.

Key field: This field used to uniquely identify each record.

Primary key: Field in table used for key fields.

Foreign key: Primary key used in second table as look-up field to identify records from original table.

In Fig-1 we illustrated a relational database. SUPPLIER and PART table showing how they represent each entity and it's attributes.Supplier Number is a primary key for the SUPPLIER table and a foreign key for the PART table.

SUPPLIER

Columns (Attribues,Fields)

Supplier_Number	Supplier_Name	Supplier_Street	Supplier_City	Supplier_State	Supplier_Zip
8259	CBM	Avenue	Dayton	OH	45220
8251	B. R.	Gandolly	Cleveland	OH	49345
8263	Jackson	Micklin	Lexington	KY	56729
8444	Bryant	Mill	Rochester	NY	11344

Rows
(Records,Tuples)

Key Field
(Primary Key)

PART

Part_Number	Part_Name	Unit_Price	Supplier_Number
137	Door latch	22.00	8259
155	Compressor	54.00	8261
150	Door molding	6.00	8263
145	Side mirror	12.00	8444

Primary Key   Foreign Key

QUES 5 : How does a modem work?

ANS :

Modem turns digital information into analog sound signals for the telephone journey and then turn it back again at the other end. Think of modems as translators. Computers speak digital, and telephones speak analog, so you need modems to translate between the two.

Suppose you want to connect your computer to an Internet Service Provider (ISP) using an ordinary phone line. The computer at your end needs a modem to **modulate** its digital signals (add them on top of an analog telephone signal) so they can travel down the phone line just like the sound of your voice. Once the signals have reached the other end, they have to pass through a second modem, which **demodulates** them (separates them out from the telephone signal and turns them back into digital form) so the ISP computer can understand them. When the ISP computer replies, it sends its signals through a modulator back down the line to you. Then

a demodulator at your end turns the signals back into digital form that your computer can understand.In FIG-2 we shows how modem works:
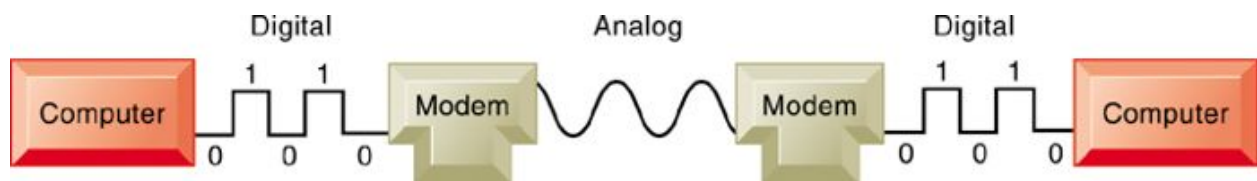
Digital   Analog   Digital

Computer   1   1   Modem   Modem   1   1   Computer

0   0   0   0   0   0

FIG-2

QUES 6 : Differentiate with Example -

I.   Hackers vs Crackers

II.   Virus vs Worms vs Trojan Horse.

I.

A **hacker** is a person who discover holes within systems and the reasons for such holes.Such as hacker find a hole in a website and for this vulnerabililty hacker can deface or destruct the website.

On the other hand a ***cracker*** is one who breaks into the system integrity of remote machines with malicious intent. Having gained unauthorized access and destroy vital data.Cracker can crack the system password or find the software break point and manipulate software data.

II.

Virus is a software program that attaches itself to other software programs or data files in order to be executed.Such as Ransomeware(CryptoLocker),

Worms is an independent programs that copy themselves from one computer to other computers over a network.Worms cause damage similar to viruses, exploiting holes in security software and potentially stealing sensitive information, corrupting files and installing a back door for remote access to the system, among other issues.Such as : Email-Worm,IRC-Worm.

Trojan horses software that appears benign but does something other than expected.It can delete,block,modify and copy the data.It can disrupt the performance of a computer system.Such as Exploit,Back-door,RootKit.