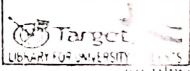# 1- Choose the correct answer

1- The primary job of the operating system is
   a- Manage commands
   b- Manage users
   c- Manage programs
   d- Manage resources

وظيفه النسخه بتاعنا اننها بتتحكم في كل حاجه دخالها وديه بنسميها ريسورس

2- Operating system manages
   a- Memory
   b- Processor
   c- I/O device
   d- All the above

Input / out Put

3- Unix operating system is ....
   a- Multitasking operating system
   b- Multiuser operating system
   c- Time sharing operating system
   d- All the above

النسخه ليا اكتر من غرض اشيرها انه تقدر تفتح اكتر من بنرنامج في نفس الوقت وتخلي اكتر من يوزر يشتغلي علي نفس الجهاز

4- In which of the operating systems , the response time is very crucial :
   a- Batch operating systems
   b- Time-sharing systems
   c- Real-time operating systems
   d- Windows

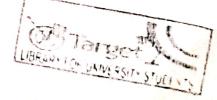الوقت مهم في تيم اوبراتج سيستم

2- What is an operating system and state its functions ?

operating system is a program that act as an intermediary between a user of a computer and the computer hardware . The central module of an operating system is the kernel . It is the part of the operating system that loads first, and it remains in m in memory.

الاوبراتنج سيستم ديه حاجه رسيطه بين اليوزر والهارد وير

main function of an operating system are :

1- The operating system is an interface between the user and the computer
   • Starts the execution of the programs
   • Recognizes input from the keyboard or mouse and sends output to the video screen or printer
   • Keeps track of files on the drives and controls access to these files.
   • Control peripherals such as printers and modems
   • Detects errors such as memory error , device failure , arithmetic overflow , etc. and provides error handling routines.
   • Collects performance statistics .

2- The operating system manages the resources of the system

Early versions of Microsoft Windows ran on top of a separate version of DOS and it ceased to be used when Windows 95 was launched as a stand-along operating system that did not require a separate DOS license. Such as Windows 95 and 98
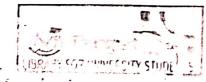
النسخه ال عندنا في البيت بتاع الويندز

- **OS/2**

    - OS/2 is an IBM operating system for the personal computer that, when introduced in 1987, was intended to provide an alternative to Microsoft Windows.

    - The name stands for "Operating System/2", because it was introduced as part of the same generation change release as IBM's "Personal System/2 (PS/2)" line of second-generation personal computers. The first version of OS/2 was released in December 1987 and newer versions were released until December 2001.

ديه نسخه عملتها اي بي ام عشان تنافس الويندز وعملت نسختين نها

- **MAC OS**

    - Mac OS is a *series of graphical user interface-based operating systems* developed by Apple Inc. for their Macintosh line of computer systems.

    - The original operating system was first introduced in 1984 as being integral to the original Macintosh, and referred to as the "system".

    - Apple re branched system version 7.6 as "Mac OS in 1996. The Macintosh is credited with having popularized the early graphical user interface concept .

ديه نسخه عملوها زمان للبات الابل ودلوقتي اسمها مكنتوش

- **Unix**

    - Unix is a multitasking , multi user compute operating system that exist in many variants. The original Unix was developed at AT&T's Bell Labs research center by Ken Thompson, Dennis Ritchie, and others.

ديه نسخه بتشتغل بالاواكر وكان عملها تلت علماء

- **Linux**

    - Linux is Unix-Like operating system .The Linux kernel, created by Linus Torvalds, was made available to the world for free and is also open source. Linux has a dedicated following and appeals to several different kinds of people:

In general, Linux is harder to manage than something like Windows, but offers more
flexibility and configuration options.

اللينكس ديه اتعملت من اللينكس وشبيها بس اواكر بس

5- Describe briefly file management in operating systems ?

- The operating system has a file management system to organize and keep track of files. Although all the operating systems provide their own file management system, you can install another file management system interacting with the operating system and providing more features, such as improved backup procedures and stricter file protection.

الفيل ما نجمينت هو اننا اتحكم في كل العمليات ال في الجهاز

6- What is kernel?
- The kernel is the core of an operating system.
- It is the software responsible for running programs and providing secure access to the machine's hardware

ده المسؤل عن كل حاجه في النسخه وهوه قلب النسخه

7- What are real-time systems?
Real-time systems are special purpose operating systems .
- They are used when there are rigid time requirements on the operation of a processor or the flow of data and thus it is often used as a control device in a dedicated application.

عرفناها قبل كدا

8- Describe the objective of multiprogramming?
In order to increase CPU utilization , the operating system keeps several jobs (a subset of jobs in the job queue) in memory at a time , if it waits for an I/O operation to complete , the operating system switches to and executes another job-allowing multiprogramming.

قلناها قبل كدا

9- What are time sharing systems?

In time sharing or multitasking systems , Multiple jobs are executed by the CPU by switching between them, but the switches occur so frequently. Thus, the user can interact with each program while it is running which means that several (human) users use the computer system interactively.

Time-sharing operating systems:
- Using multiprogramming to handle multiple interactive jobs
- Processor's time is shared among multiple users
- Multiple users simultaneously access the system through terminals

نفس الكلام قولناها قبل كدا

10-Illustrate with a graph the different components of a window in Microsoft windows 7 OS

- Controls and allocates resources

ايه الفانكشن بتاعها يعني ايه العمليات ال بتقوم بيها بتعمل كل حاجه زي انها بتشغلك البرامج بتشوف انت دخلت ايه وفتحت ملفات ايه بتتحكم في الخطا وبتتحكم في الريسورس كمان

3- Describe briefly the evolution of operating systems ?
Evolution of operating systems

The structure of early systems:
- Single user system
- Large machines run from consol
- Programmer/user as operator
- Paper Trap or punched cards
- Early software: Assemblers ,
- Low CPU utilization
- But very secure
- Simple Batch systems

في انواع نسخ كتير اول نوع النسخ القديمه وجيه كان بيستخدمها واحد بس وحاجه ليب سيكيور وكمان بتشتغل بالكنسول نوع منها اسمه الباتش سيتم

- **Simple Batch systems**

Batch systems improve the utilization of computers. Jobs were submitted on cards or tape to an operator who batches jobs together sequentially

Problems

- Slow performance- , I/O operations and CPU could not overlap , card reader very slow .
- CPU is often idle

هي نظام شغال بنظام زي الكروت ومشكلته انه بطيئ وبيفضل وقت طويل مش شغال ايديل يعني

- **Multiprogrammed Batch systems**
  In order to increase CPU utilization , the operating system keeps several jobs (a subset of jobs in the job queue) in memory at a time , if it waits for an I/O operation to complete , the operating system switches to and executes another job-allowing multiprogramming.

ملتي بروجرام هو اننا اشغل اكتر من برنامج في نفس الوقت

- **Time-sharing systems**
  In time sharing or multitasking systems , Multiple jobs are executed by the CPU by switching between them, but the switches occur so frequently. Thus, the user can interact with each program while it is running which means that several (human) users use the computer system interactively.

هو الفكره اننا عاوز استغل الوقت اكتر من واحد شغال علي نفس الجهاز فعاوز يحصل تبديل بين العمليات

Time-sharing operating systems:
- Using multiprogramming to handle multiple interactive jobs
- Processor's time is shared among multiple users
- Multiple users simultaneously access the system through terminals

التيم تشارنج طبعا ديه مميزاتها

- **Real-Time systems**

real-time systems are special purpose operating systems . They are used when there are rigid time requirements on the operation of a processor or the flow of data and thus it is often used as a control device in a dedicated application. It has well-defined fixed time constraints .

الريل تايم هو اننا يهمني بس الوقت الوقت مهمه جدا بالنسبه ايه

- **Personal computer (PC) systems:**

Microprocessor technology evolved to the point that it become possible to build desktop computers as powerful as the mainframes of the 1970s.

A computer system dedicated to a single user is referred to as a personal computer (PC).

In the first PCs, operating system was neither multiuser nor multitasking .

ديه النسخ ال عندنا في البيت من اول امين فرام

- **Multiprocessor systems**

Multiprocessor system refers to the use of two or more central processing units (CPU) within a single computer system. These multiple CPUs are in a close communication sharing the computer bus ,memory and other peripheral devices.

These types of systems are used when very high speed is required to process a large volume of data. The main advantage of multiprocessor system is to get more work done in a shorter period of time. Moreover, multiprocessor systems prove more reliable in the situations of failure of one processor.

اننا يبقي عندي اكتر من برسوسر في نفس الوقت

- **handheld systems**

A handheld computer is a computer that can conveniently be stored in a pocket (of sufficient size) and used while you are holding it .Today's handheld computers, which are also called personal digital assistants (PDAs) , can be divided into those that accept handwriting as input and those with small keyboards .

التلفونات ال بتبقي في ادينا

4- List and describe briefly four types of modern operating systems?

Examples of operating systems

- DOS
- Microsoft windows
- OS/2
- MAC OS
- Unix
- Linux

- **DOS : Disk Operating systems**

DOS or disk operating system are operating systems that were most commonly found the IBM PCs and were popular between 1981 and 1995.
the most popular being the MS-DOS .

الدوس هو نسخه بتتكون من كونسل بس زي ال الاي بي ام

- **Microsoft windows**

Windows is a range of graphical interface operating systems that are developed and sold by Microsoft.