	ما اسم الجدولة التي يأخذ فيها كل برنامج جزء صغيرا من الوقت قبل أن يترك الدور لبرامج الأخرى
a.	**Time-Sharing Scheduling**
b.	Priority Scheduling
c.	Real-Time Scheduling
d.	Batch Scheduling

	للوصول إلى البرامج الداخلية اللازمة ..... للتعامل مع ه
a.	memory
b.	hardware
c.	**interrupt vector**
d.	operating system

9.	Operating systems provide an environment for: توفر نظم التشغيل بيئة مناسبة من أجل .....
a.	execution of programs only.
b.	execution of services to programs only.
c.	**execution of programs and services to programs and users.**
d.	none of the above.

10.	Almost all operating systems have a User interface (UI) that may be: معظم نظم التشغيل لديها واجهة للتفاعل مع المستخدم. هذه الواجهة قد تكون من نوع:
a.	command-line interface (CLI).
b.	graphics user interface (GUI).
c.	batch
d.	**all the above. كل ماسبق**

11.	One set of operating-system services provides functions that are helpful to the user: من مجموع
a.	read and write files and directories.
b.	exchange information between processes
c.	for each type of error, os should take the appropriate action
d.	**all the above. كل ماسبق**

12.	A method used to pass parameters to the OS API: حدد إحدى الطرق المستخدمة لتمرير البيانات لأوامر نظام التشغيل
a.	pass the parameters in registers
b.	store parameters in a block, or table, in memory
c.	place parameters, or pushed, onto the stack by the program and popped off the stack by the operating system
d.	**all of the above.**

13.	In the design and implementation of an operating system:
a.	mechanisms and policies are not considered as different concepts.
b.	mechanisms and policies have the same concepts.
c.	mechanisms determine how to do something, policies decide what will be done.
d.	all the above.

14.Answer following statement using True (T) or False (F): [2 marks]

Statement	Answer
a. Command Line Interface (CLI) or command interpreter allows direct command entry	T
b. When power initialized on system, execution starts at a fixed memory location in ROM used to hold initial boot code	T

c. Many modern operating systems implement loadable kernel modules	T
d. Internal structure of different operating systems are same	F

Question 2. [4 marks]

1. Which of the following instructions should be privileged? Why ?
   a) Set value of timer
      p Privileged p Non-Privileged

Privileged: If the user program can directly change timer's values, a user program may change the scheduling timer to take more time than in execution and increase its own quantum.

   b) Read the clock
      p Privileged p Non-Privileged

Non-Privileged, as there is no consequences on the system if all applications access the clock.

   c) Clear memory
      p Privileged p Non-Privileged

Privileged, because if allowed to user applications, one application may clear memory areas that are critical for the system or other programs' memory areas.

   d) Switch from user to kernel mode
      p Privileged p Non-Privileged

Privileged, because only the kernel should be able to perform this switch. A user program should never be able to switch to kernel mode.

...partment ...ation Sciences
...perating Systems
...tal Marks: 20
Fall 2016-17
Midterm Exam I
Date: 30-October-2016
Instructions:

Time: 6:30pm – 8:00p...
Name.
ID:

...pring Semester 2016-2017 CSC227 Midterm 1 Exam 27-03-2017

Student's Name:..... Student's ID.....

Question 2. [3 marks]

2.1 What is the difference between a trap and an interrupt? (1 Mark)

interrupt is from hardware like (mouse clicking)

trap is from software like (system call)

2.2 How interrupts are handled in a computer system? (2 Marks)

by two ways: save address of interrupted Process in PC

1 - Polling

2 - Vectored interrupt

Question 3. [6 marks]

a) [1 mark] List four major activities of an operating system in regard to process management?

b) [1 mark] What is the purpose of system calls?

c) [1 mark] What is the purpose of system programs?

d) [1 mark] What are the three major activities of an operating system in regard to memory management?