University of Palestine

Course Title: انظمة تشغيل

Date: 20/05/2019
No. of Questions: **3**
Time: **2 hours**

Lecturer Name: **Dr. Mohammed Shbier**
College Name:_____
Specialist:_____
Total Grade: 30
Using Calculator :**YES**

2nd Semester. 2018/2019 **Final Exam**

Student Name: Student No:

Dear students,

First of all you should to read carefully through all the exam questions, and then you have to attempt the questions that you think you can answer completely.

This exam contains **THREE (3)** questions in **EIGHT(8)** printed pages include the cover page.

Answer all question in the space provided.

Good luck & best wishes

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FOR INSTRUCTOR USE ONLY

Question 1	Question 2	Question 3	Total

Notes:

Signature:

Q1: True or False with correction (10Marks)

( )	1. CPU must check every memory access generated in user mode to be sure it is between base and limit for that user
( )	2. Compile time: If memory location known a priori, relocatable code can be generated; must recompile code if starting location changes
( )	3. Logical address – generated by the CPU; also referred to as virtual address, whereas Physical address – address seen by the memory unit
( )	4. Physical address space is the set of all physical addresses generated by CPU
( )	5. A process can be swapped temporarily out of memory to a backing store, and then brought back into memory for continued execution
( )	6. Swapping normally enabled, started if more than threshold amount of memory allocated, disabled once memory demand reduced below threshold
( )	7. HDD, Main memory and registers are only storage CPU can access directly
( )	8. Main memory must support both OS and user processes
( )	9. Simplest methods, divide memory into several fixed-sized partitions. First partition for user programs, second partition for OS
( )	10. Variable-partition sizes for efficiency (sized to a given process' needs), Hole – block of available memory; holes of various size are scattered throughout memory

Q2) (10Marks)

1. Sketch physical memory for given segment shown in the follow table? 2 marks

Segments	Limit	base
0	1000	1400
1	400	6300
2	400	4300
3	1100	3200
4	1000	4700

2. In Dynamic Storage-Allocation, there are three methods, list and in short describe them? 3 marks

3. Define the following teams 5 marks

a) External Fragmentation 1 marks

b) Internal Fragmentation 1 marks

c) Segment table 1 marks

d) Mamery - Frames 1 marks

e) Mamery - Pages 1 marks

Q3) **(10 Marks)**

a) What is ECC stands for? How it works? 2 marks

b) Sketch RAID level 0, 1, 5, 6? 2 marks

c) Sketch the head movement, and computer the total movements according to FCFS, SSTF, and SCAN algorithms given the following 6 marks

We have scheduling algorithms with a request queue (0-199)

queue: 98, 183, 37, 122, 14, 124, 65, 67

Head pointer 53

1. FCFS 2 marks

2. SSTF 2 marks

3. SCAN 2 marks

END OF QUESTIONS