



قائمة الاسئلة

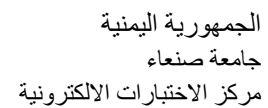
نظم تشغيل - المستوى الثاني - قسم تقنية معلومات - كلية الحاسوب وتكنولوجيا المعلومات - الفترة - درجة الامتحان (40)

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- 1) Which on is wrong in operating system التي من أي التشغيل نظم في خطأ الاتي من أي
 - 1) - Operating system is a resource allocator
 - 2) - Operating system is a programs controller
 - 3) - Operating system supports Multi-task program
 - 4) + Operating system is always a single task program
- 2) Which of the flowing acts as an intermediary between a computer hardware and system and applications? من أي
الاتي يعمل كوسيط بين عتاد الحاسوب والتطبيقات والنظم المختلفة؟
 - 1) + OS
 - 2) - Process
 - 3) - System Call
 - 4) - All the above are true
- 3) The I/O device controller can
 - 1) + controls a specific device type with its device driver.
 - 2) - controls the CPU using its device driver.
 - 3) - sends traps to CPU.
 - 4) - receives interrupts from CPU.
- 4) Which one is not a User interface. الاستخدام واجهة من ليس الاتي من أي.
 - 1) - Command-Line (CLI)
 - 2) - Graphics User Interface (GUI)
 - 3) - Batch file
 - 4) + Process
- 5) _____ is one program running at all times on the computer. الحاسوب في مستمر بشكل يشتغل برنامج.
 - 1) - Application
 - 2) - Operation
 - 3) - Utility
 - 4) + kernel
- 6) In multiprogramming concept, a CPU of 4 cores could في الملتيبيروجرام اذا البروسيسور
يمكن انوى 4 يحوي البروسيسور اذا الملتيبيروجرام في
 - 1) - process a single task at a time.
 - 2) + process 4 task at a time.
 - 3) - process 4 threads of each task in each core.
 - 4) - it depends if the task is a process or a thread.
- 7) Round robin is a
 - 1) - Kind of magnetic drum
 - 2) - Memory allocation policy
 - 3) + Process scheduling policy
 - 4) - Process synchronization policy
- 8) Which is not the state of the process? العملية حالة من ليس الاتي من أي.
 - 1) - Ready
 - 2) - Running
 - 3) - Waiting
 - 4) + storage
- 9) Context switching occurs when ... عندما المحتوى تبديل يظهر ...
 - 1) + the CPU switches from process to anther
 - 2) - the CPU switches between different I/O devices
 - 3) - the CPU switches from busy to idle state



- 4) - the CPU switches from idle to busy state
- 10) Which scheduling algorithm is based on the concept of giving higher priority to processes that have been waiting for a longer time? أي تستند التالية الخوارزميات من أي أطول لفترة تنتظر كانت التي للعمليات أعلى أولوية إعطاء مفهوم إلى تستند التالية الخوارزميات من أي
- 1) ☒ First-Come, First-Served (FCFS) im MFQ
 - 2) - Shortest Job Next (SJN)
 - 3) - Round Robin (RR)
 - 4) - Priority Scheduling
- 11) The operating system stores the information about the proces in في العمليات بيانات تخزين التشغيل نظم
- 1) ☒ its PCB
 - 2) - one of its memory pages
 - 3) - a shared page
 - 4) - Hard Disk
- 12) A process said to be in _____ state if it was waiting for an event that will never occur. انها عليها يقال العملية. في حالة اذا كانت منتظرة لحدث لا يمكن يظهر
- 1) - safe
 - 2) ☒ deadlock
 - 3) - starvation
 - 4) - waiting
- 13) Which one of the following is the deadlock avoidance algorithm? خوارزميات من الاتي من أي
- 1) - round-robin algorithm
 - 2) ☒ banker's algorithm
 - 3) - elevator algorithm
 - 4) - karn's algorithm
- 14) Scheduling leads to : الى تؤدي الجدولة :
- 1) ☒ increase CPU utilization
 - 2) - decrease CPU utilization
 - 3) - keep the CPU more idle
 - 4) - a, b and c are false
- 15) Which of the following condition is required for deadlock to be possible? لظهور سبب تكون الاتية الشروط من أي deadlock
- 1) - mutual exclusion
 - 2) - Circular wait
 - 3) - Hold and wait
 - 4) ☒ a, b and c are true
- 16) Multi-threading is used to enhance ...
- 1) - response time
 - 2) - sharing and resource utilization
 - 3) - execution cost
 - 4) ☒ a, b and c are true
- 17) A program could create a kernel thread by sending a ...
- 1) ☒ system call
 - 2) - North-bound call
 - 3) - an interrupt
 - 4) - All above
- 18) Using first-come-first-serve, what is the average waiting time?



<u>Process</u>	<u>Burst Time</u>
P_1	17
P_2	12
P_3	3

Using first-come-first-serve, what is the average waiting time?



- | | | |
|----|---|------|
| 1) | + | 9.67 |
| 2) | - | 8.67 |
| 3) | - | 15 |
| 4) | - | 29 |

19) What is the correct processes for (Gantt Chart)?

<u>Process</u>	<u>Burst Time</u>
P_1	6
P_2	8
P_3	5
P_4	3

Shortest job first, what is the correct Gantt Chart



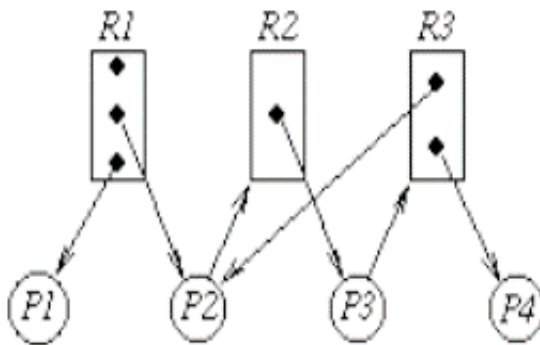
- | | | |
|----|---|-----------------|
| 1) | - | p1, p2 , p3, p4 |
| 2) | + | p4, p3, p1, p2 |
| 3) | - | p2, p1, p3, p4 |
| 4) | - | p3, p1, p2, p4 |

20) In priority scheduling, process with low priority will not dispatch to CPU for long time, which known as starvation problem. What is the solution?

- 1) - Use aging which is a mechanism to decrease priority with time
- 2) + Use aging which is a mechanism to increase priority with time
- 3) - Use FCFS
- 4) - Use SJF



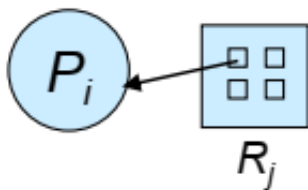
- 21) Waiting time is : هو الانتظار زمن :
- 1) - the total time in the blocked and waiting queue
 - 2) - the total time from the completion till the submission of a process
 - 3) + the total time spent in the ready queue
 - 4) - the total time spent in the running queue
- 22) In round robin scheduling algorithm, using large quantum time (q) cause the performance similar to ...
- 1) - SJF
 - 2) - RR with priority
 - 3) + FCFS
 - 4) - FBMQ
- 23) The operation when CPU switches to another process is called ب المعالج في المحتوى تبديل عملية تسمى
- 1) - System call
 - 2) - Multiprocessing
 - 3) + context switch
 - 4) - program
- 24) What is true about the CPU scheduling?
- 1) - The scheduling algorithm is stored in the PCB
 - 2) - The scheduling algorithm is stored in the process itself
 - 3) - The scheduling algorithm is selected randomly from the algorithm list
 - 4) + a, b and c are false
- 25) Which one is not in Process Control Block (PCB) عناصر من ليس الاتي من عنصر أي (PCB)
- 1) - Program counter
 - 2) + bootstrap program
 - 3) - I/O status information
 - 4) - CPU registers
- 26) Deadlock is highly to occur in
- 1) - Preemptive scheduling
 - 2) + Non-preemptive scheduling
 - 3) - MLQ scheduling
 - 4) - MFQ scheduling
- 27) which one is type of System Calls: أنواع من يكون الاتي من أي :
- 1) - create file
 - 2) - read file
 - 3) - write file
 - 4) + All of these (a, b, c) are true
- 28) In the following diagrams: الاتي الشكل في :





figure_3_Q28.png

- 1) - There is deadlock start from P1
 - 2) - There is deadlock in P1-R2-P2-R3-P2
 - 3) - There is deadlock start from P4
 - 4) ☒ All a, b and c false
- 29) Scheduler selects the jobs from the pool of jobs and loads it into the ready queue
المهام لاختيار طريقة هي من موقع المهمات العامة واضافتها الى طابور الجاهزية
- 1) - Short-term
 - 2) ☒ Long-term
 - 3) - Medium-term
 - 4) - All of these
- 30) in Resource-Allocation Graph the P_i process



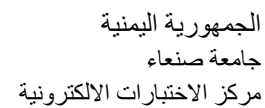
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- 1) - P_i requests instance of R_j
 - 2) ☒ P_i is holding an instance of R_j
 - 3) - P_i sends instance to R_j
 - 4) - all of these are false
- 31) in Resource-Allocation Graph the P_i process



figure_5_Q31.png

- 1) ☒ P_i requests instance of R_j
 - 2) - P_i is holding an instance of R_j
 - 3) - P_i sends instance to R_j
 - 4) - all of these are false
- 32) Multiprogramming of computer system increases
- 1) - memory usage effecincy
 - 2) - storage usage effecincy
 - 3) - computation cost
 - 4) ☒ a,b and c are false
- 33) What is the executing sequence that ensure satisfies safety requirement?



	Allocation	Max	Available	Need
	A B C	A B C	A B C	A B C
P ₀	0 1 0	7 5 3	2 3 0	7 4 3
P ₁	3 0 2	9 0 2		6 0 0
P ₂	3 0 2	4 0 2		1 2 0
P ₃	2 1 1	2 2 2		0 1 1
P ₄	0 0 2	4 3 3		4 3 1

 figure_6_Q33.png

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