|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | What is an Operating System? | | | |
| A. | collection of programs that manages hardware resources | B. | system service provider to the application programs |
| C. | link to interface the hardware and application programs | D. | **all of the mentioned** |
|  |  | | | |
| 2 | If a process fails, most operating system write the error information to a: | | | |
| A. | **Log file** | B. | Another running process |
| C. | New file | D. | None of the mentioned |
|  |  | | | |
| 3 | The systems which allow only one process execution at a time, are called \_\_\_\_\_\_\_\_\_\_. | | | |
| A. | Uniprogramming system | B. | **Uniprocessing system** |
| C. | Unitasking system | D. | None of the mentioned |
|  |  | | | |
| 4 | In Unix, which system call creates a new process | | | |
| A. | **fork** | B. | create |
| C. | new | D. | print |
|  |  | | | |
| 5 | A process can be terminated due to \_\_\_\_\_\_\_\_\_\_. | | | |
| A. | normal exit | B. | fatal error |
| C. | killed by another process | D. | **all of the mentioned** |
|  |  | | | |
| 6 | A process stack does not contain \_\_\_\_\_\_\_\_\_\_. | | | |
| A. | function parameters | B. | local variables |
| C. | return address | D. | **PID of child process** |
|  |  | | | |
| 7 | What is the interprocess communication? | | | |
| A. | communication within the process | B. | **communication between two processes** |
| C. | communication between two threads of the same process | D. | None of the mentioned |
|  |  | | | |
| 8 | Using semaphores, each process has a critical section used to access the \_\_\_\_\_\_\_\_\_\_. | | | |
| A. | **resources** | B. | users |
| C. | processors | D. | computers |
|  |  | | | |
| 9 | In the requirement of mutual exclusion a process remain inside its critical section for a/an \_\_\_\_\_\_\_\_\_\_. | | | |
| A. | module only | B. | infinite time |
| C. | program | D. | **finite time** |
|  |  | | | |
| 10 | The link between two processes to send and receive messages is called \_\_\_\_\_\_\_\_\_\_. | | | |
| A. | synchronization link | B. | **communication link** |
| C. | Message-passing link | D. | shared link |
|  |  | | | |
| 11 | Consider following processes   |  |  |  | | --- | --- | --- | | Processes | Burst Time | Arrival Time | | P1 | 6 | 2 | | P2 | 3 | 5 | | P3 | 8 | 1 | | P4 | 3 | 0 | | P5 | 4 | 4 |   Using FCFS scheduling algorithm, what will be the average waiting time? | | | |
| A. | 40 | B. | 52 |
| C. | **8** | D. | 10.4 |
|  |  | | | |
| 12 | What does an edge from process Pi to Pj in a wait for graph? | | | |
| A. | **Pi is waiting for Pj to release a resource that Pi needs.** | | |
| B. | Pj is waiting for Pi to release a resource that Pj needs. | | |
| C. | Pi is waiting for Pj to leave the system. | | |
| D. | Pj is waiting for Pi to leave the system, | | |
|  |  | | | |
| 13 | A system has 3 processes sharing 4 resources. If each process needs a maximum of 2 units then, deadlock \_\_\_\_\_\_\_\_\_\_\_\_. | | | |
| A. | may occur | B. | has to occur |
| C. | none or the mentioned | D. | **can never occur** |
|  |  | | | |
| 14 | The disadvantage of a process being allocated all the resources before the beginning its execution is \_\_\_\_\_\_\_\_\_\_\_\_. | | | |
| A. | very high resource utilization | B. | low CPU utilization |
| C. | **low resource utilization** | D. | very high CPU utilization. |
|  |  | | | |
| 15 | To occur deadlock which set of following must hold? | | | |
| A. | mutual exclusion, no pre-emption | | |
| B. | mutual exclusion, no pre-emption, circular wait | | |
| C. | hold and wait, circular wait | | |
| D. | **mutual exclusion, no pre-emption, circular wait, hold & wait** | | |
|  |  | | | |
| 16 | A problem encountered in multitasking when a process is perpetually denied necessary resources is called \_\_\_\_\_\_\_\_\_\_\_\_. | | | |
| A. | deadlock | B. | Inversion |
| C. | **starvation** | D. | aging |
|  |  | | | |
| 17 | Which one of the following is a visual way to determine the deadlock occurrence? | | | |
| A. | none of the mentioned | B. | **resource allocation graph** |
| C. | starvation graph | D. | inversion graph |
|  |  | | | |
| 18 | Variables whose scope is associated with functions, procedures, or blocks, in a program and parameters of functions or procedure calls. This kind of data is allocated on the \_\_\_\_\_. | | | |
| A. | CPU register | B. | **stack** |
| C. | heap | D. | program counter |
|  |  | | | |
| 19 | What will be the effect of memory fragmentation? | | | |
| A. | page fault | B. | better utilization of memory |
| C. | **poor utilization of memory** | D. | stack overflow |
|  |  | | | |
| 20 | Which of the following CPU Scheduling algorithm the average waiting time for the process to start execution is often quite long | | | |
| A. | **FCFS** | B. | SJF |
| C. | Priority Scheduling | D. | Round robin |
|  |  | | | |
| 21 | Which of the following can be used to eliminate the deadlock under process termination? | | | |
| A. | Abort all deadlock processes. | | |
| B. | Abort a process at time until deadlock cycle is eliminated. | | |
| C. | It is not possible to abort all deadlock processes. | | |
| D. | **A and B** | | |
|  |  | | | |
| 22 | In internal fragmentation, memory is internal to a partition and \_\_\_\_\_\_\_\_\_\_\_\_. | | | |
| A. | is always used | B. | is being used |
| C. | **is not being used** | D. | none of the mentioned |
|  |  | | | |
| 23 | \_\_\_\_\_\_\_\_\_\_ is generally faster than \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_. | | | |
| A. | **first fit, best fit, worst fit** | B. | best fit, worst fit , first fit |
| C. | worst fit, best fit, first fit | D. | none of the mentioned |
|  |  | | | |
| 24 | The time taken to move the disk arm to the desired cylinder is called the \_\_\_\_\_\_\_\_\_\_\_\_. | | | |
| A. | **seek time** | B. | rotational latency |
| C. | positioning time | D. | random access time |
|  |  | | | |
| 25 | Consider a disk queue with requests for I/O to blocks on cylinders : 98 183 37 122 14 124 65 67  Considering FCFS (first cum first served) scheduling, the total number of head movements is, if the disk head is initially at 53 : | | | |
| A. | 600 | B. | 620 |
| C. | 630 | D. | **640** |