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**3rd Sem / Branch : Comp, IT, GE**

**Subject:- Operating System**

Time : 3Hrs.

M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  
10x1=10)

- Q.1 Which algorithm uses the concept of time quantum?  
a) Shortest job scheduling  
b) Round Robin Scheduling  
c) First come first serve scheduling  
d) multiprocessor Scheduling
- Q.2 Which of the following is not the process state?  
a) New                                      b) Ready  
c) Running                                d) Old
- Q.3 To access the services of the operating system, the interface is provided by the \_\_\_\_\_.  
a) Library  
b) System calls  
c) Assembly instructions  
d) API
- Q.4 Which one of the following is the address generated by CPU?  
a) Physical Address                      b) Absolute Address  
c) Logical Address                        d) All of the mentioned
- Q.5 Which module gives control of the CPU to the process selected by the short-term scheduler?  
a) Dispatcher  
b) Interrupt  
c) Scheduler  
d) None of the mentioned

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- Q.6 In priority scheduling algorithm \_\_\_\_\_.  
a) CPU is allocated to the process with highest priority  
b) CPU is allocated to the process with lowest Priority  
c) Equal priority processes cannot be scheduled  
d) none of the mentioned
- Q.7 Which of the following commands will allow the user to search contents of a file for a particular pattern.  
a) Touch                                      b) Grep  
c) Find                                        d) IS
- Q.8 What is the mounting of file system?  
a) Creating of a file system  
b) Deleting a file system  
c) Attaching portion of the file system into a directory structure  
d) Removing the portion of the file system into a directory structure
- Q.9 When a process is in a "blocked" state waiting for same I/O service. When the service is completed it goes to the \_\_\_\_\_.  
a) Terminated state                      b) Suspended state  
c) Running state                              d) Ready state
- Q.10 What is linux?  
a) Single user , single tasking  
b) Single user, multitasking  
c) Multi user , single tasking  
d) Multi user , multitasking

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### SECTION-B

**Note:** Objective type questions. All questions are compulsory.  
(10x1=10)

- Q.11 FCFS is preemptive scheduling algorithm\_\_\_\_\_.  
(True/False)
- Q.12 Linux and windows are the example of operating system  
\_\_\_\_\_. (True/False)
- Q.13 What are the types of network operating system? Name them.
- Q.14 Define Scheduler.
- Q.15 Describe fixed partitioning.
- Q.16 The condition where a process holds one resource and Requests another resource already held by another Process creating a circular wait is known as\_\_\_\_\_.
- Q.17 Internal fragmentation Occurs when allocated memory is \_\_\_\_\_ than what is actually needed by the process. (Larger/Smaller)
- Q.18 The Command \_\_\_\_\_ displays the current date and time.
- Q.19 Spooling stands for \_\_\_\_\_.
- Q.20 Whenever a process is created the O.S creates a PCB  
\_\_\_\_\_. (True/False)

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What is inter-process communication (IPC)?
- Q.22 Explain the necessary conditions for deadlock to occur.
- Q.23 Explain the concept of swapping in memory management.
- Q.24 What is round robin scheduling and how does it work?
- Q.25 Explain types of file system in brief.

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- Q.26 Write short note on shared and dedicated devices.
- Q.27 What is the difference between deadlock prevention and deadlock avoidance?
- Q.28 What is internal and external fragmentation ? How it could be removed?
- Q.29 Discuss five services of operating system.
- Q.30 Explain various commands given below with example.  
a) grep b) mkdir c) date  
d) merge e) talk
- Q.31 Explain the concept of redirecting and piping with standard errors in linux operating system.
- Q.32 What are the various system calls? Explain any two types.
- Q.33 Explain various schedulers in operating system.
- Q.34 Discuss the criteria for scheduling any process.
- Q.35 What is logical address space and physical address space?

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain memory hierarchy structure with neat and clean diagram?
- Q.37 Write short note on the following :  
a) Context switching  
b) Inter process Communication  
c) Process synchronization
- Q.38 What is an operating system ? Discuss any three types of operating system in detail.

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