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Roll No. 180831/170831/120831

Computer Engg.

Subject : Operating Systems

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Which of the following operating system does not implement multitasking truly?
a) Windows XP b) Wmdows98
c) MS DOS d) Windows NT
- Q.2 What is Operating System
a) It acts as an interface between the hardware and application programs.
b) It is a collection of programs that manage hardware resources.
c) It act as Resource Manager
d) All of the above
- Q.3 To access the services of operating system, the interface is provided by the _____
a) System calls b) API
c) Library
d) Assembly instructions
- Q.4 Which of the following is an example of operating system?
a) MS-Word b) MS-Excel
c) MS-DOS d) MS-Access

- Q.5 When several processes access the same data concurrently and the outcome of the execution depends on the particular order in which the access take place is called _____
a) Dynamic condition
b) Race condition
c) Essential condition
d) Critical condition
- Q.6 In Operating Systems, which of the following is/are CPU scheduling algorithm?
a) Round Robin b) Shortest Job First
c) Priority d) All of the above
- Q.7 If a process is executing in its critical section, then no other processes can be executing in their critical section. What is this condition called?
a) Mutual exclusion b) Critical exclusion
c) Synchronous exclusion
d) Asynchronous exclusion
- Q.8 Which of the following condition is required for a deadlock to be possible?
a) Mutual exclusion
b) A process may hold allocated resources while awaiting assignment of other resources.
c) No resource can be forcibly removed from a process holding
d) All of the above
- Q.9 Which one of the following is the deadlock avoidance algorithm?
a) Banker's algorithm
b) Round-robm algorithm
c) Elevator algorithm

- d) Kara's algorithm
- Q.10 Linux is a?
- single user, single tasking
 - single user, multitasking
 - multi user, single tasking
 - multi user, multitasking

SECTION-B

Note: Objective type questions. All questions are compulsory. $10 \times 1 = 10$

- Q.11 Why operating system is known as Resource Manager?
- Q.12 Write the name of any two operating system.
- Q.13 Define Preemptive CPU Scheduling.
- Q.14 What is the difference between logical and physical address space?
- Q.15 Define throughput.
- Q.16 Define Process Synchronization.
- Q.17 Give the name of two external commands of MS DOS.
- Q.18 Differentiate between DOS & Windows operating system.
- Q.19 Main memory is a Secondary Storage (Y/N)
- Q.20 What is kernel?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $12 \times 5 = 60$

- Q.21 Briefly explain Round Robin scheduling.
- Q.22 Differentiate between Preemptive & Non-Preemptive CPU scheduling
- Q.23 What is process, draw the Process State Transition Diagram & explain briefly

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- Q.24 What is Long Term scheduler (Job Scheduler) describes with diagram.
- Q.25 What is deadlock what are necessary conditions which can lead to a deadlock situation in a system?
- Q.26 Difference between two user interfaces GUI and CUI
- Q.27 What do you mean by file organization? What are the different types of the file organization?
- Q.28 What is the function of operating system?
- Q.29 Explain the concept of virtual memory in short.
- Q.30 What are the differences between Network Operating System and Distributed Operating System?
- Q.31 Explain Process Control Block
- Q.32 What are the differences between Single User & Multiuser operating system.
- Q.33 What is demand paging?
- Q.34 Write a short note on system call
- Q.35 What is context switching?

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $2 \times 10 = 20$

- Q.36 What is operating System? Explain different types of tasks done by Operating System.
- Q.37 What is process? Draw State transition diagram & explain its various states in details. Also discuss how the PCB is associated with Process.
- Q.38 Explain the concept of Paging in details.

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