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SRM
DELHI-NCR CAMPUS, GHAZIABAD (U.P)

Academic Year: 2023-24 (ODD)

Test : **Internal Examination I**
Course Code & Title : **21CSC202J, Operating Systems**
Year & Sem : **II/III**

Date& Session : **18-08-2023/FN**
Duration : **1 Hour**
Max. Marks : **30**

Part - A

Answer all questions **(10 Q x 1 M = 10 Marks)**

Q. No	Question	Marks	BL	CO	PO
1	What is the command interpreter's primary purpose? a) offer an interface between the API and application programs b) manage operating system files c) to locate and execute subsequent user-specified instruction. d) None of the previously listed	1	1	1	1
2	The interface which provides access to the services of the operating system is a) API b) System calls c) Library d) Assembly instructions	1	1	1	1
3	Which of the following statements is false? a)The kernel is the first component of the operating system to load into memory when booting. b) It stays in memory during the entirety of a computer session. c) The kernel is made up of numerous modules that cannot be loaded in an operating system that is already running. d) The operating system's kernel is the program that makes up its essential core.	1	1	1	1
4	Kernel mode of operating system is also called a) System mode b) Supervisor mode c) User mode d) Both a and b	1	1	1	1
5	When a process needs to conduct I/O operations only into operating system buffers or has pending I/O, swapping _____ be used. a) must never b) maybe c) can d) must	1	1	1	1
6	The operating system is accountable for? a) booting from disk b) disk initialization c) bad-block recovery d) all listed above	1	1	1	1
7	Similar to how system calls offer a common interface between the application and the operating system, _____ supply a uniform device-access interface to the I/O subsystem.	1	1	1	1

a) Device drivers
b) I/O systems
c) Devices
d) Buses

8	In the case of real time operating systems: a) No kernel is required b) all processes have the same priority c) process scheduling can be done only once d) a task must be serviced by its deadline period	1	1	1	1
9	A multi-processor system contributes to a a) loosely coupled system b) small system c) tightly coupled system d) both a and b	1	1	1	1
10	Capability of a system to constantly provide service relative to level of surviving hardware is known as a) Graceful degradation b) Degradation c) Up-gradation d) Graceful up-gradation	1	1	1	1

Part B
Answer any three questions **3Q x 4M=12 Marks**

11	Which types of data structures are used by kernel? Explain each in brief.	4	1	1	1
12	With the help of a neat diagram, explain the functioning of system calls. Mention different types of system calls.	4	2	1	1
13	Discuss various services and operations of operating systems.	4	2	1	1
14	Differentiate between: a) Multiprogramming and multiprocessing b) System call and system programs	4	2	1	2

Part C
Answer all questions **1Q x 8M= 8 Marks**

15.	(A) What is Kernel? Discuss in detail how the monolithic and micro kernel approaches to system architecture differ.	8	2	1	2
	(OR)				
	(B) Explain different structures of operating systems with suitable diagrams	8	2	1	2