Sample Question Paper

University of Mumbai

Program: **Computer Engineering**

Curriculum Scheme: Rev2016

Examination: TE Semester V

Course Code: CSDL5012 and Course Name: Advanced Operating Systems

Time: 2 hour Max. Marks: 80

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Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks**
1.	Which of the following is an architectural driven advanced operating system?
Option A:	Data Base operating systems
Option B:	Multiprocessor Operating systems
Option C:	Real time operating Systems
Option D:	Time sharing Operating systems
2.	Which of the following parameter indicates how the process wishes to react to signals?
Option A:	Array
Option B:	The control terminal field
Option C:	Pointer
Option D:	Timer
3.	The address of the next instruction to be executed by the current process is provided by the __
Option A:	Process stack
Option B:	Pipe
Option C:	Program counter
Option D:	CPU registers
4.	If process requires any Hardware and if it is not available then process enters into____ state
Option A:	Ready to run,Swapped
Option B:	Zombie
Option C:	Ready to run in memory
Option D:	Asleep in memory
5.	_____ interacts with the hardware and most of the tasks like memorymanagement, task scheduling and file management
Option A:	Shell
Option B:	Kernel
Option C:	Bash
Option D:	Device drivers
6.	When kernel wants to allocate any buffer it removes a node from the free list,usually from the _____of list but is could take it from _____of the list too
Option A:	middle,beginning

Option B:	middle,any side
Option C:	beginning,middle
Option D:	any side,middle
7.	SVR4 stands for
Option A:	Standard V release 4
Option B:	System V Release 4
Option C:	Standard V Release
Option D:	System V Release
8.	Each process contains a private per process region table called _____
Option A:	pregion
Option B:	region table
Option C:	preregion
Option D:	regionp table
9.	Which of the following parameter restrict the size of a process & the size of file itcan write
Option A:	Permission mode field
Option B:	Limit field
Option C:	Pointer
Option D:	Timer
10.	Files that maintain the hierarchical structure of the file system
Option A:	Descriptors
Option B:	Directories
Option C:	Modifiers
Option D:	Relative files
11.	Minimum process required for context switching
Option A:	0
Option B:	1
Option C:	2
Option D:	3
12.	Files in which users store information?
Option A:	Info files
Option B:	Ordinary files
Option C:	Special files
Option D:	Complex files
13.	The files that appear as entries in the directories.
Option A:	Ordinary files
Option B:	Special files
Option C:	Duplicate files
Option D:	Sub directories
14.	Which one of the following is the address generated by CPU?
Option A:	physical address

Option B:	absolute address
Option C:	logical address
Option D:	Relative Address
15.	A continuous area of a process's address space (such as text, data and stack) is called as
Option A:	Pregion
Option B:	region
Option C:	stack
Option D:	Program Counter
16.	When a Job scheduler passes the process to process scheduler its status is always
Option A:	ready
Option B:	run
Option C:	Hold
Option D:	finished
17.	------ is the software through which, the kernel of a computer communicates with different hardware, without having to go into the details of how the hardware works
Option A:	CPU registers
Option B:	Memory Control Information
Option C:	Device driver
Option D:	Scheduler
18.	In which OS Jobs have deadline for completion
Option A:	Real Time OS
Option B:	Distributed OS
Option C:	Desktop OS
Option D:	Multiprocessor OS
19.	Which directory contains all super user executable commands inUNIX OS
Option A:	/sbin
Option B:	/bin
Option C:	root
Option D:	/etc
20.	Which building block primitive of UNIX allows a stream of data to be passed from reader process and writer process?
Option A:	Standard Input
Option B:	Standard Output
Option C:	PIPE
Option D:	Standard error

Q2	**Solve any Four out of Six**	**5 marks each**

A	Discuss the following features of distributed operating systems: Resource sharing, load balancing, availability and fault tolerance
B	Bring out the design issues of Multiprocessor operating system.
C	What are the characteristics of Real time operating system.
D	Enlist and explain the fields of Super block
E	Write an algorithm for Conversion of path name to an i-node in UNIX system.
F	Explain the term Cache Affinity.

Q3.	**Solve any Two Questions out of Three** **10 marks each** ***Please delete the instruction shown in front of every sub question***
A	Discuss the Micro, Nano and Monolithic kernel models of real time and embedded systems. Discuss the various applications or real life areas where real time and embedded operating systems are used.
B	What are the advantages of virtualization in cloud? Discuss the various types of virtualization.
C	Compare and contrast EDF scheduling and RMA scheduling .