1 x 70=70



## **BRAINWARE UNIVERSITY**

## Term End Examination 2021 - 22 Programme – Diploma in Computer Science & Engineering **Course Name – Operating System** Course Code - DCSE403 (Semester IV)

Time allotted: 1 Hrs.25 Min. Full Marks: 70

[The figure in the margin indicates full marks.]

Group-A (Multiple Choice Type Question) Choose the correct alternative from the following: (1) If a process fails, most operating system write the error information to a b) New file a) Log file c) Another running process d) None of these (2) Multiprocessing system gives a a) Small system b) Tightly coupled system c) loosely coupled system d) Macro Sysem (3) What is the function of FORK() in Kernel a) To create child process b) To create processor d) To create TLB c) To create deadlock (4) Booting means a) Restarting a computer b) Shutting down c) Removing error d) Installing program (5) Process is a) Program in Execution b) Process control Block

d) None of these c) Application software

(6) Multiprocessor system is better than single processor in terms of

a) Increased Throughput b) Expensive hardware

d) Both a and b c) Operating system

(7) Unix OS was developed by

a) Bell Labs b) NASA

c) Verizon Systems d) Kaspersky Labs

(8) When a peripheral device needs immediate attention from the OS, it creates

b) Stack a) Interrupt c) Spool d) Page file

(9) key stroke or mouse click are referred to as

a) Interrupt b) Tasks

Page 1 of 6

c) Event	d) Processes
(10) In Unix, Which system call creates a new process?	
a) a. fork()	b) b. new()
c) c. create()	d) d. None of these
(11) A process can be terminated due to	
a) a. Normal exit	b) b. Fatal error
c) c. Killed by another process	d) d. All of these
(12) What is inter process communication?	
a) a. Communication within the process	b) b. Communication between two process
c) d. None of these	d) c. Communication between two threads of sam e process
(13) In a time-sharing operating system, when the time slo ss goes from the running state to the	t given to a process is completed, the proce
a) Blocked state	b) Ready state
c) Suspended state	d) Terminated state
(14) What is a medium-term scheduler?	
<ul> <li>a) It selects which process has to be brought into t he ready queue</li> </ul>	b) It selects which process has to be executed next a nd allocates CPU
c) It selects which process to remove from memory by swapping	d) None of these
(15) An SJF algorithm is simply a priority algorithm when	e the priority is
a) The predicted next CPU burst	b) None of these
c) The inverse of the predicted next CPU burst	d) The current CPU burst
(16) Mutual exclusion can be provided by the	
a) Mutex locks	b) Both mutex locks and binary semaphores
c) Binary semaphores	d) None of these
(17) Process synchronization can be done on	
a) Hardware level	b) Both hardware and software level
c) Software level	d) None of these
(18) The wait operation of the semaphore basically works	on the basic system call.
a) block()	b) stop()
c) wait()	d) hold()
(19) The code that changes the value of the semaphore is	
a) Remainder section code	b) Non – critical section code
c) Critical section code	d) None of these
(20) Which one of the following is the deadlock avoidance	e algorithm?
a) Elevator algorithm	b) Bankers algorithm
c) Round-robin algorithm	d) None of these
(21) Semaphores are two types, they are	
a) Binary, Counting	b) Rapid, Counting
c) Binary, Random	d) None of these
(22) A system is in the safe state if	
<ul> <li>a) The system can allocate resources to each process in some order and still avoid a deadlock</li> </ul>	b) There exist a safe sequence
c) It can be terminated properly	d) All of these
(23) A Process Control Block(PCB) does not contain	
a) Code	b) Bootstrap program
c) Stack Page 2	d) None of these of 6

(24) The state of a process is defined by	
a) The final activity of the process	b) The activity to next be executed by the process
c) The current activity of the process	d) The activity just executed by the process
(25) What is the degree of multiprogramming?	
a) The number of processes executed per unit time	b) The number of processes in the ready queue
c) The number of processes in the I/O queue	d) The number of processes in memory
(26) When the process issues an I/O request	
a) It is placed in an I/O queue	b) It is placed in a waiting queue
c) It is placed in the ready queue	d) It is placed in the Job queue
(27) The context of a process in the PCB of a process doe	es not contain
a) the value of the CPU registers	b) memory-management information
c) the process state	d) context switch time
(28) Which of the following need not necessarily be saved	d on a context switch between processes?
a) General purpose registers	b) Translation lookaside buffer
c) Program counter	d) All of these
(29) Which process can be affected by other processes ex-	ecuting in the system?
a) Co-operating process	b) Child process
c) Parent process	d) init process
(30) Mutual exclusion can be achieved by the	
a) Mutex locks	b) Both mutex locks and binary semaphores
c) Binary semaphores	d) None of these
(31) The interval from the time of submission of a process	s to the time of completion is termed as
a) Waiting time	b) Response time
c) Turnaround time	d) Throughput
(32) The request and release of resources are	
a) System calls	b) Special programs
c) Command-line statements	d) None of these
(33) For mutual exclusion to prevail in the system	
a) The processor must be a uniprocessor rather than a multiprocessor	b) At least one resource must be held in a non sharab le mode
c) There must be at least one resource in a sharable	d) None of these
mode	
(34) The disadvantage of a process being allocated all its	
a) Low CPU utilization	b) Low resource utilization
c) Very high resource utilization	d) None of these
(35) Which module gives control of the CPU to the proce	
a) Dispatcher	b) Scheduler
c) Interrupt	d) None of these
(36) Which one of the following can not be scheduled by	the kernel?
a) Kernel level thread	b) User level thread
c) Process	d) None of these
(37) Messages sent by a process	
a) Have to be of a fixed size	b) Can be fixed or variable sized
c) Have to be a variable size	d) None of these
(38) In the Zero capacity queue	
a) The queue can store at least one message	b) The sender keeps sending and the messages don't wait in the queue

<ul> <li>c) The sender blocks until the receiver remessage</li> </ul>	ceives the d) None of these
(39) A parent process calling sy nate.	stem call will be suspended until children processes termi
a) wait()	b) fork()
c) exit()	d) exec()
(40) Cascading termination refers to termination	ation of all child processes before the parent terminates
a) Normally	b) Normally or abnormaly
c) Abnormally	d) None of these
(41) In UNIX, each process is identified by	its
a) Process Control Block	b) Process Identifier
c) Device Queue	d) None of these
(42) The real difficulty with SJF in short ter	m scheduling is
a) It is too good an algorithm	b) Knowing the length of the next CPU request
c) It is too complex to understand	d) None of these
(43) The FCFS algorithm is particularly trou	ublesome for
a) Time sharing systems	b) Multiprocessor systems
c) Multiprogramming systems	d) Operating systems
(44) A solution to the problem of indefinite	blockage of low – priority processes is
a) Starvation	b) Ready queue
c) Aging	d) Wait queue
(45) The time taken for the desired sector to	rotate to the disk head is called
a) Positioning time	b) Random access time
c) Rotational latency	d) Seek time
(46) What is the disk bandwidth?	
a) The total number of bytes transferred	b) The total number of bytes transferred divided by t he total time between the first request for service and the completion on the last transfer
c) Total time between the first request fo d the completion of the last transfer	r service an d) None of these
	d moves from one end to the other, servicing requests alon other end, it immediately returns to the beginning of the di e return trip.
a) LOOK	b) C-LOOK
c) SCAN	d) C-SCAN
(48) A memory buffer used to accommodate	e a speed differential is called
a) Stack pointer	b) Accumulator
c) Cache	d) Disk buffer
(49) Which one of the following is the addre	ess generated by CPU?
a) Physical address	b) Logical address
c) Absolute address	d) None of these
(50) The page table contains	-
a) Page offset	b) Base address of each page in physical memory
c) Page size	d) None of these
(51) What is compaction?	
a) A paging technique	b) A technique for overcoming external fragmentati on
c) A technique for overcoming internal f	ragmentatio d) A technique for overcoming fatal error Page 4 of 6

(52) The relocation register helps in	
a) Providing more address space to processes	b) A different address space to processes
c) To protect the address spaces of processes	d) None of these
(53) Transient operating system code is code that	
a) Is not easily accessible	b) Stays in the memory always
c) Comes and goes as needed	d) Never enters the memory space
(54) When memory is divided into several fixed sized pa	artitions, each partition may contain
a) Exactly one process	b) Multiple processes at once
c) At least one process	d) None of these
(55) A solution to the problem of external fragmentation	is
a) Compaction	b) Smaller memory space
c) Larger memory space	d) None of these
(56) The is used as an index into the page to	able.
a) Frame bit	b) Page offset
c) Page number	d) Frame offset
(57) If a page number is not found in the TLB, then it is	known as a
a) TLB miss	b) Buffer miss
c) TLB hit	d) None of these
(58) Each entry in a translation lookaside buffer (TLB) c	,
a) Key	b) Bit value
c) Value	d) None of these
(59) Consider a disk queue with requests for I/O to block Considering FCFS (first cum first served) schedulin he disk head is initially at 53 is?	
a) 600	b) 630
c) 620	d) 640
(60) A deadlock can be broken by	
a) Abort one or more processes to break the circular wait	b) Preempt all resources from all processes
c) Abort all the process in the system	d) None of these
(61) The switching of the CPU from one process or threa	ad to another is called
a) Process switch	b) Context switch
c) Task switch	d) All of these
(62) RTP stands for	
a) Real time protocol	b) Real time transmission protocol
c) Real time transmission control protocol	d) Real time transport protocol
(63) Data cannot be written to secondary storage unless	written within a
a) File	b) Directory
c) Swap space	d) Text format
(64) Magnetic tape drives write data at a speed	_ disk drives.
a) Much lesser than	b) Comparable to
c) Much faster than	d) None of these
(65) In the algorithm, the disk arm starts at one t r end, servicing requests till the other end of the disk and servicing continues.	k. At the other end, the direction is reversed a
a) LOOK	b) C-SCAN
c) SCAN	d) C-LOOK

n

(66) The CPU letches the instruction from memory	according to the value of
a) Program counter	b) Status register
c) Instruction register	d) Program status word
(67) Memory management is the technique in which storage for use in main memory is called?	ch system stores and retrieves data from secondary
a) Fragmentation	b) Paging
c) Mapping	d) None of these
(68) In the fixed size partition, the degree of multip	programming is bounded by
a) The number of partitions	b) The CPU utilization
c) The memory size	d) All of the these
(69) is the concept in which a prondary memory according to the requirement.	cess is copied into the main memory from the seco
a) Segmentation	b) Demand paging
c) Swapping	d) Paging
, , <u>.</u>	he order: A, B, C, D, A, B, E, A, B, C, D, E. If the per of page transfers with an empty internal store of
a) 8	b) 10
c) 9	d) 7