



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.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) If a process fails, most operating system write the error information to a

a) Log file	b) New 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 System
- (3) What is the function of FORK() in Kernel

a) To create child process	b) To create processor
c) To create deadlock	d) To create TLB
- (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
c) Application software	d) None of these
- (6) Multiprocessor system is better than single processor in terms of

a) Increased Throughput	b) Expensive hardware
c) Operating system	d) Both a and b
- (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
- a) Interrupt
 - b) Stack
 - c) Spool
 - d) Page file
- (9) key stroke or mouse click are referred to as
- a) Interrupt
 - b) Tasks
 - 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) c. Communication between two threads of same process
 - d) d. None of these
- (13) In a time-sharing operating system, when the time slot given to a process is completed, the process goes from the running state to the
- a) Blocked state
 - b) Ready state
 - c) Suspended state
 - d) Terminated state
- (14) What is a medium-term scheduler?
- a) It selects which process has to be brought into the ready queue
 - b) It selects which process has to be executed next and 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 where 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 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
- a) The system can allocate resources to each process in some order and still avoid a deadlock
 - 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
 - d) None of these
- (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 does 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 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 executing 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 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
 - b) At least one resource must be held in a non

- than a multiprocessor sharable mode
- c) There must be at least one resource in a sharable mode d) None of these
- (34) The disadvantage of a process being allocated all its resources before beginning its execution is
- 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 process selected by the short-term scheduler?
- 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
c) The sender blocks until the receiver receives the message d) None of these
- (39) A parent process calling _____ system call will be suspended until children processes terminate.
- a) wait() b) fork()
c) exit() d) exec()
- (40) Cascading termination refers to termination of all child processes before the parent terminates _____
- a) Normally b) Normally or abnormally
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 term 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 troublesome 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
c) Rotational latency
- b) Random access time
d) Seek time
- (46) What is the disk bandwidth?
- a) The total number of bytes transferred
c) Total time between the first request for service and the completion of the last transfer
- b) The total number of bytes transferred divided by the total time between the first request for service and the completion on the last transfer
d) None of these
- (47) In the _____ algorithm, the disk head moves from one end to the other, servicing requests along the way. When the head reaches the other end, it immediately returns to the beginning of the disk without servicing any requests on the return trip.
- a) LOOK
c) SCAN
- b) C-LOOK
d) C-SCAN
- (48) A memory buffer used to accommodate a speed differential is called _____
- a) Stack pointer
c) Cache
- b) Accumulator
d) Disk buffer
- (49) Which one of the following is the address generated by CPU?
- a) Physical address
c) Absolute address
- b) Logical address
d) None of these
- (50) The page table contains _____
- a) Page offset
c) Page size
- b) Base address of each page in physical memory
d) None of these
- (51) What is compaction?
- a) A paging technique
c) A technique for overcoming internal fragmentation
- b) A technique for overcoming external fragmentation
d) A technique for overcoming fatal error
- (52) The relocation register helps in _____
- a) Providing more address space to processes
c) To protect the address spaces of processes
- b) A different address space to processes
d) None of these
- (53) Transient operating system code is code that _____
- a) Is not easily accessible
c) Comes and goes as needed
- b) Stays in the memory always
d) Never enters the memory space
- (54) When memory is divided into several fixed sized partitions, each partition may contain
- a) Exactly one process
c) At least one process
- b) Multiple processes at once
d) None of these
- (55) A solution to the problem of external fragmentation is _____
- a) Compaction
c) Larger memory space
- b) Smaller memory space
d) None of these
- (56) The _____ is used as an index into the page table.
- a) Frame bit
c) Page number
- b) Page offset
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) consists of _____

a) Key

b) Bit value

c) Value

d) None of these

(59) Consider a disk queue with requests for I/O to blocks on cylinders. 98 183 37 122 14 124 65 67 Considering FCFS (first cum first served) scheduling, the total number of head movements is, if the 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