



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
 Programme – Bachelor of Computer Applications
 Course Name – Operating System
 Course Code - BCA302
 (Semester III)

Time : 1 Hr.25 Min.

Full Marks : 70

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 70=70

Choose the correct alternative from the following :

- (1) The is an application software

a) OS	b) MS WORD
c) DOS	d) None of these
- (2) In operating system, each process has its own

a) address space and global	b) open files
c) pending alarms, signals and signal handlers	d) all of these
- (3) Which one of the following error will be handle by the operating system?

a) power failure	b) lack of paper in printer
c) connection failure in the network	d) all of these
- (4) Example of single user single tasking os is

a) LINUX	b) WINDOWS
c) DOS	d) None of these
- (5) What is a shell script?

a) group of commands	b) a file containing special symbols
c) a file containing a series of commands	d) group of functions
- (6) Which command is used for making the scripts interactive?

a) Ip	b) Input
c) Read	d) Write
- (7) Which of the following approaches do not require knowledge of the system state?

a) Deadlock detection.	b) Deadlock prevention.
c) Deadlock avoidance.	d) None of these

- (8) Which of the following are language processors?
- a) Assembler
 - b) Compiler
 - c) Interpreter
 - d) All of these
- (9) An edge from a resource instance to a process in RAG is known as
- a) Assignment edge
 - b) Claim edge
 - c) Request edge
 - d) None of these
- (10)is a scheduler is invoked when there is need to perform job scheduling
- a) Long-term
 - b) Medium-term
 - c) Short-term
 - d) None of these
- (11) Deadlock prevention ispossible
- a) Always
 - b) Not always
 - c) Sometimes
 - d) None of these
- (12) Example of mutually exclusive resource is
- a) RAM
 - b) Printer
 - c) RAM and Printer
 - d) None
- (13) Scheduling is :
- a) allowing a job to use the processor
 - b) making proper use of processor
 - c) all of these
 - d) none of these
- (14) To avoid deadlock
- a) there must be a fixed number of resources to allocate
 - b) resource allocation must be done only one
 - c) all deadlocked processes must be aborted
 - d) inversion technique can be used
- (15) The request and release of resources are _____
- a) command line statements
 - b) interrupts
 - c) system calls
 - d) special programs
- (16) For sharable resources, mutual exclusion :
- a) is required
 - b) is not required
 - c) maybe or may not be required
 - d) none of these
- (17) A state is safe, if :
- a) the system does not crash due to deadlock occurrence
 - b) the system can allocate resources to each process in some order and still avoid a dead
 - c) the state keeps the system protected and safe
 - d) all of these
- (18) A system is in a safe state only if there exists a :
- a) safe allocation
 - b) safe resource
 - c) safe sequence
 - d) all of these
- (19) If no cycle exists in the resource allocation graph :
- a) then the system will not be in a safe state
 - b) then the system will be in a safe state
 - c) all of these
 - d) none of these
- (20) The content of the matrix Need is :
- a) Allocation – Available
 - b) Max – Available
 - c) Max – Allocation
 - d) Allocation – Max
- (21) What is the ready state of a process?

- a) when process is scheduled to run after some execution
b) when process is unable to run until some task has been completed
c) when process is using the CPU
d) none of these
- (22) A set of processes is deadlock if
a) each process is blocked and will remain so forever
b) each process is terminated
c) all processes are trying to kill each other
d) none of these
- (23) Which of the following is not the state of a process?
a) New
b) Old
c) Waiting
d) Running
- (24) When a process terminates :
a) It is removed from all queues
b) It is removed from all, but remains in the job queue
c) Its process control block is de-allocated
d) Its process control block is never de-allocated
- (25) The processes that are residing in main memory and are ready and waiting to execute are kept on a list called
a) job queue
b) ready queue
c) execution queue
d) process queue
- (26) The process to be aborted is chosen on the basis of the following factors :
a) priority of the process
b) process is interactive or batch
c) how long the process has computed
d) all of these
- (27) Deadlock prevention possible?
a) All time
b) Sometimes
c) Never
d) None of these
- (28) The _____ time in a swap out of a running process and swap in of a new process into the memory is very high.
a) context – switch
b) waiting
c) execution
d) all of these
- (29) Swapping requires a _____
a) motherboard
b) keyboard
c) monitor
d) backing store
- (30) Every address generated by the CPU is divided into two parts :
a) frame bit & page number
b) page number & page offset
c) page offset & frame bit
d) frame offset & page offset
- (31) External fragmentation will not occur when :
a) first fit is used
b) best fit is used
c) worst fit is used
d) no matter which algorithm is used, it will always occur
- (32) Operating System maintains the page table for
a) each process
b) each thread
c) each instruction
d) each address
- (33) Run time mapping from virtual to physical address is done by
a) Memory management unit
b) CPU

- c) PCI d) None of these
- (34) The three major methods of allocating disk space that are in wide use are _____
- a) Contiguous b) Linked
c) Indexed d) All of these
- (35) In linked allocation _____
- a) each file must occupy a set of contiguous blocks on the disk b) each file is a linked list of disk blocks
c) all the pointers to scattered blocks are placed together in one location d) none of these
- (36) Contiguous allocation of a file is defined by _____
- a) disk address of the first block & length b) length & size of the block
c) size of the block d) total size of the file
- (37) The first fit and best fit algorithms suffer from _____
- a) internal fragmentation b) external fragmentation
c) starvation d) all of these
- (38) The heads of the magnetic disk are attached to a _____ that moves all the heads as a unit.
- a) Spindle b) disk arm
c) track d) none of these
- (39) What is the host controller?
- a) controller built at the end of each disk b) controller at the computer end of the bus
c) all of these d) none of these
- (40) 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) 620
c) 630 d) 640
- (41) On media that use constant linear velocity (CLV), the _____ is uniform.
- a) density of bits on the disk b) density of bits per sector
c) the density of bits per track d) none of these
- (42) In the _____ algorithm, the disk arm starts at one end of the disk and moves toward the other end, servicing requests till the other end of the disk. At the other end, the direction is reversed and servicing continues.
- a) LOOK b) SCAN
c) C-SCAN d) C-LOOK
- (43) Root directory of a disk should be placed

- a) at the fixed address in the main memory
b) at a fixed location on the disk
c) at the fixed location on system disk
d) anywhere on the disk
- (44) Creating a job queue is a function of
a) Spooler
b) Interpreter
c) Compiler
d) Drive
- (45) Which of the following is/are the technique(s) for performing I/O management function.
a) Programmed I/O
b) Interrupt driven I/O
c) Direct Memory Access
d) All of these
- (46) On a movable head system, the time it takes to position the head at the track is known as
a) seek time
b) rotational delay
c) access time
d) Transfer time
- (47) In policy, when the last track has been visited in one direction, the arm is returned to the opposite end of the disk and the scan begins again.
a) Last in first out
b) Shortest service time first
c) SCAN
d) Circular SCAN
- (48) A is collection of related fields that can be treated as a unit by some application program.
a) Field
b) Record
c) File
d) Database
- (49) _____ is an approach to restricting system access to authorized users.
a) Role-based access control
b) Process-based access control
c) Job-based access control
d) None of these
- (50) The protection domain of a process contains _____
a) object name
b) rights-set
c) both object name and rights-set
d) none of these
- (51) Which one of the following is not an attack, but a search for vulnerabilities to attack?
a) denial of service
b) port scanning
c) memory access violation
d) dumpster diving
- (52) Multipartite viruses attack on
a) files
b) boot sector
c) memory
d) all of these
- (53) A swap space can reside in....
a) separate disk partition
b) RAM
c) Cache
d) none of these
- (54) Which scheduler selects processes from secondary storage device is called
a) Short term scheduler.
b) Long term scheduler.
c) Medium term scheduler.
d) Process scheduler
- (55) The term 'page traffic' describes
a) number of pages in memory at a given instant.
b) number of papers required to be brought in at a given page request.
c) the movement of pages in and out of memory
d) number of pages of executing programs load

- y.
- (56) The "turn-around" time of a user job is the
- a) time since its submission to the time its results become available.
 - b) number of papers required to be brought in at a given page request.
 - c) total time taken to execute the job.
 - d) time taken for the job to move from assembly phase to completion phase.
- (57) Memory utilization factor shall be computed as follows
- a) memory in use/total memory connected.
 - b) purpose of a data structure
 - c) memory allocated/free existing memory
 - d) memory committed/total memory available.
- (58) What is not true about memory management?
- a) Virtual memory is used in multi-user system
 - b) segmentation suffers from external fragmentation
 - c) paging suffers from internal fragmentation
 - d) segmented memory can be paged
- (59) 'LRU' page replacement policy is
- a) Last Replaced Unit.
 - b) Last Restored Unit.
 - c) Least Recently Used.
 - d) Least Required Unit.
- (60) The main memory accommodates....
- a) Operating system
 - b) CPU
 - c) Keyboard
 - d) None of these
- (61) Which amongst the following is not an advantage of Distributed systems?
- a) Reliability
 - b) Incremental growth
 - c) Resource sharing
 - d) None of these
- (62) Poor response time is usually caused by
- a) Process busy
 - b) High I/O rates
 - c) High paging rates
 - d) Any of these
- (63) Optimal page replacement algorithm also known as....
- a) LIFO
 - b) NRU
 - c) Clairvoyant replacement algorithm
 - d) page buffering
- (64)has the lowest fault rate of all the page replacement algorithm.
- a) Optimal page replacement
 - b) FIFO page replacement
 - c) LRU page replacement
 - d) Counting based
- (65) A critical section is a program segment
- a) which should run in a certain specified amount of time.
 - b) which avoids deadlocks.
 - c) where shared resources are accessed.
 - d) which must be enclosed by a pair of semaphore operations, P and V.
- (66) Locality of reference implies that the page reference being made by a process
- a) will always be to the page used in the previous page reference.
 - b) is likely to be the one of the pages used in the last few page references.
 - c) will always be to one of the pages existing in memory.
 - d) will always lead to a page fault.
- (67) The main reason to encrypt a file is to
- a) Reduce its size
 - b) Secure it for transmission
 - c) Prepare it for backup
 - d) Include it in the start-up sequence

(68) Which amongst the following is not a valid page replacement policy?

- a) LRU policy (Least Recently Used)
- c) RU policy (Recurrently used)

b) FIFO policy (First in first out)

d) Optimal page replacement policy

(69) Which of the page replacement algorithms suffers from Belady's Anomaly?

a) FIFO

c) Optimal Page replacement

b) LRU

d) All of these

(70) Page stealing

a) is a sign of efficient system

c) should be the tuning goal

b) is taking page frames other working sets

d) is taking larger disk spaces for pages paged out