



CSC 201

B.Sc. IIIrd SEMESTER EXAMINATION, 2022-23

COMPUTER SCIENCE

(Operating System)

(4+0)

(CBCS MODE)

AFFIX PRESCRIBED
RUBBER STAMP

Paper ID

(To be filled in the
OMR Sheet)

8393

Date (तिथि) : _____

अनुक्रमांक (अंकों में) :

Roll No. (In Figures)

अनुक्रमांक (शब्दों में) :

Roll No. (In Words) :

Time : 1 Hour

समय : 1 घण्टा

Max. Marks : 60

अधिकतम अंक : 60

नोट : पुस्तिका में 40 प्रश्न दिये गये हैं, सभी प्रश्न करने होंगे। प्रत्येक प्रश्न 1.5 अंक का होगा।

Important Instructions :

1. The candidate will write his/her Roll Number only at the places provided for, i.e. on the cover page and on the OMR answer sheet at the end and nowhere else.
2. Immediately on receipt of the question booklet, the candidate should check up the booklet and ensure that it contains all the pages and that no question is missing. If the candidate finds any discrepancy in the question booklet, he/she should report the invigilator within 10 minutes of the issue of this booklet and a fresh question booklet without any discrepancy be obtained.

महत्वपूर्ण निर्देश :

1. अभ्यर्थी अपने अनुक्रमांक केवल उन्हीं स्थानों पर लिखेंगे जो इसके लिए दिये गये हैं, अर्थात् प्रश्न पुस्तिका के मुख्य पृष्ठ तथा साथ दिये गये ओ०एम०आर० उत्तर पत्र पर, तथा अन्यत्र कहीं नहीं लिखेंगे।
2. प्रश्न पुस्तिका मिलते ही अभ्यर्थी को जाँच करके सुनिश्चित कर लेना चाहिए कि इस पुस्तिका में पूरे पृष्ठ हैं और कोई प्रश्न छूटा तो नहीं है। यदि कोई विसंगति है तो प्रश्न पुस्तिका मिलने के 10 मिनट के भीतर ही कक्ष परिप्रेक्षक को सूचित करना चाहिए और बिना त्रुटि की दूसरी प्रश्न पुस्तिका प्राप्त कर लेना चाहिए।

1. Which of the following is a single-user operating system ?
 - (A) Windows
 - (B) MAC
 - (C) Ms-Dos
 - (D) None of these
2. When does page fault occur ?
 - (A) The page is present in memory
 - (B) FIFO fails
 - (C) The page does not present in memory
 - (D) The buffering occurs
3. Which of the following is system software ?
 - (A) Operating system
 - (B) Backup
 - (C) Utilities
 - (D) All of the above
4. The number of processes completed per unit time is known as _____.
 - (A) Output
 - (B) Throughput
 - (C) Maximum
 - (D) Capacity
5. Which is not the layer of the Operating system ?
 - (A) Kernel
 - (B) Shell
 - (C) Application program
 - (D) Critical section

6. The operating system manages.....
- (A) Memory
 - (B) Processor
 - (C) Disk and I/O devices
 - (D) All of the above
7. In real time operating system _____.
- (A) Process scheduling is not needed
 - (B) All processes have the same priority
 - (C) Kernel is not required
 - (D) A task must be serviced by its deadline period
8. Which of the following is not an operating system ?
- (A) DOS
 - (B) Linux
 - (C) Windows
 - (D) Oracle
9. CPU scheduling is the basis of _____.
- (A) Multiprogramming operating systems
 - (B) Larger memory sized systems
 - (C) Distributed systems
 - (D) None of the mentioned
10. When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the _____.
- (A) Main Memory
 - (B) New State
 - (C) Running state
 - (D) Ready state

11. The operating system maintains a _____ that keeps track of how many pages have been allocated, how many are there, and how many are available.
- (A) Memory
 - (B) Mapping
 - (C) Page table
 - (D) Swapping
12. The segment of code in which the process may change common variables, update tables, write into files is known as _____.
- (A) Program
 - (B) Critical section
 - (C) Non – critical section
 - (D) Synchronizing
13. Semaphore is a/an _____ to solve the critical section problem.
- (A) Hardware for a system
 - (B) Special program for a system
 - (C) Integer variable
 - (D) None of the mentioned
14. Which of the following are CPU scheduling algorithms ?
- (A) Priority scheduling
 - (B) Round Robin
 - (C) Shortest Job First
 - (D) All of the above
15. With.....a page is brought into main memory only when the reference is made to a location that page.
- (A) Demand paging
 - (B) Main paging
 - (C) Pre paging
 - (D) Post paging

16. Match the following.
- | | |
|----------------------|--|
| (i) Mutual exclusion | (a) A process may hold allocated resources while waiting assignment. |
| (ii) Hold and wait | (b) No resource can be forcibly removed from a process holding it. |
| (iii) No preemption | (c) Only one process may use a resource at a time. |
- (A) i-a, ii-b, iii-c
 (B) i-a, ii-c, iii-b
 (C) i-b, ii-c, iii-a
 (D) i-c, ii-a, iii-b
17. is a condition in which there is a set of concurrent processes, only one of which is able to access a given resource or perform a given function at any time.
- (A) Mutual Exclusion
 (B) Busy Waiting
 (C) States
 (D) Command
18. The following conditions of policy must be present for a deadlock to be possible.
- | | |
|----------------------|--------------------|
| (i) Mutual exclusion | (ii) Hold and wait |
| (iii) No preemption | (iv) Circular wait |
- (A) (ii) and (iii) only
 (B) (iv) only
 (C) (iii) and (iv) only
 (D) All (i), (ii), (iii) and (iv)
19. A program is passive while a process is.....
- (A) Submissive
 (B) Spontaneous
 (C) Active
 (D) Deadlock

20. FIFO scheduling is.....
- (A) Round Robin
 - (B) Non preemptive scheduling
 - (C) Deadline
 - (D) Fair share scheduling
21. The term "Operating System" means.....
- (A) A set of programs which controls computer working
 - (B) The way a computer operator works
 - (C) Conversion of high-level language in to machine level language
 - (D) The way a floppy disk drive operates
22. A program responsible for assigning the CPU to the process the has been selected by the short term scheduler is known as.....
- (A) Algorithm
 - (B) Dispatcher
 - (C) Debugger
 - (D) Executer
23. A process is created and is initially put in the.....
- (A) Ready queue
 - (B) Multitasking
 - (C) i/o
 - (D) Exit Queue
24. Which of the following memory allocation scheme suffers from external fragmentation ?
- (A) Segmentation
 - (B) Virtual Memory
 - (C) Swapping
 - (D) View

25. The operating system manages.....
- (A) Memory
 - (B) Processor
 - (C) Disk and I/O devices
 - (D) All of the above
26. Which is not the layer of the Operating system ?
- (A) Kernel
 - (B) Shell
 - (C) Application program
 - (D) Critical Section
27.refers to the ability of an operating system to support multiple threads of execution with a single process.
- (A) Multithreading
 - (B) Processing
 - (C) Executing
 - (D) Bi-threading
28.is a facility that allows programmers to address memory from a logical point of view, without regard to the main memory, physically available.
- (A) Operating System
 - (B) Real memory
 - (C) Virtual memory
 - (D) Hard Disk
29. With.....only one process can execute at a time; meanwhile all other process are waiting for the processor. With.....more than one process can be running simultaneously each on a different processor.
- (A) Processing, Programming
 - (B) File handling, Uniprocessing
 - (C) Multiprogramming, Multiprocessing
 - (D) Uniprogramming, Uniprocessing

30.refers to the ability of multiple process (or threads) to share code, resources or data in such a way that only one process has access to shared object at a time.
- (A) Synchronization
 - (B) Mutual Exclusion
 - (C) Dead lock
 - (D) Starvation
31.is the ability of multiple process to co-ordinate their activities by exchange of information.
- (A) Synchronization
 - (B) Processing
 - (C) Locking
 - (D) Round Robin
32. Which of the following is not the approach to dealing with deadlock ?
- (A) Prevention
 - (B) Avoidance
 - (C) Detection
 - (D) Processing
33. Which of the following are the states of a five state process model ?
- (i) Running (ii) Ready (iii) New (iv) Exit (v) Destroy
- (A) (i) and (v) only
 - (B) (ii), (iv) and (v) only
 - (C) (i), (ii), (iii) and (iv) only
 - (D) (i) and (ii)
34. Process Management function of an operating system includes.
- (A) Process creation and termination
 - (B) Process scheduling and dispatching
 - (C) Process switching
 - (D) All of the above

35. Which of the following is true about Process ?
- (A) A process is basically a program in execution
 - (B) The execution of a process must progress in a sequential fashion
 - (C) A process is defined as an entity which represents the basic unit of work to be implemented the system
 - (D) All of the above
36. In which state, processor executes its instructions ?
- (A) Ready
 - (B) Waiting
 - (C) Running
 - (D) Start
37. In fixed size partition, the degree of multiprogramming is bounded by ____.
- (A) The number of partitions
 - (B) The CPU utilization
 - (C) The memory size
 - (D) All of the mentioned
38. When memory is divided into several fixed sized partitions, each partition may contain ____.
- (A) Exactly process
 - (B) At least one process
 - (C) Multiple processes at once
 - (D) None of the mentioned

39. Which of the following condition is required for a deadlock to be possible ?
- (A) Mutual exclusion
 - (B) A process may hold allocated resources while awaiting assignment of other resources
 - (C) No resource can be forcibly removed from a process holding it
 - (D) All of the mentioned
40. In contiguous memory allocation _____.
- (A) Each process is contained in a single contiguous section of memory
 - (B) All processes are contained in a single contiguous section of memory
 - (C) The memory space is contiguous
 - (D) None of the mentioned
