

(6 pages)

Reg. No. : .....

**Code No. : 30174 E      Sub. Code : GMCS 61/  
GMSE 61**

B.Sc. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Computer Science/Software Engineering – Main

OPERATING SYSTEMS

(For those who joined in July 2012-2015 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Multiprocessor system is also known as \_\_\_\_\_.
  - (a) Asymmetric system
  - (b) Symmetric system
  - (c) Parallel system
  - (d) None

2. The only state transition that is initiated by the user process itself is \_\_\_\_\_.
  - (a) dispatch
  - (b) block
  - (c) wakeup
  - (d) none
  
3. Semaphore is a \_\_\_\_\_ to solve the critical section problem.
  - (a) Hardware for a system
  - (b) Integer variable
  - (c) Special program for a system
  - (d) None
  
4. The address of the next instruction to be executed by the current process is provided by the \_\_\_\_\_.
  - (a) CPU register
  - (b) program counter
  - (c) process stack
  - (d) pipe

5. A set of process is deadlock, if
- (a) each process is blocked and will remain so for ever
  - (b) each process is terminated
  - (c) all process are trying to kill each other
  - (d) none
6. A deadlock state is a \_\_\_\_\_ state.
- (a) Secure                      (b) Unsecure
  - (c) Safe                         (d) Unsafe
7. The process of moving the program from disk into main memory is called \_\_\_\_\_.
- (a) swapping in                (b) swapping out
  - (c) thrashing                 (d) prepaging
8. The \_\_\_\_\_ in an operating system component concerned with the system's memory organization scheme and memory management strategies.
- (a) memory manager        (b) scheduler
  - (c) I/O manager             (d) Device manager

9. \_\_\_\_\_ is a computing technique in which you increase the size of a computer's memory.  
(a) Virtual memory      (b) Cache memory  
(c) Primary memory      (d) Secondary memory
10. \_\_\_\_\_ is a program that can infect other program by modifying.  
(a) Virus                      (b) Trojan house  
(c) Trap door                  (d) None

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) What is multiprocessor scheduling? Explain.  
Or  
(b) Write a note on operating system objectives and its functions.
12. (a) What is process management? What are the activities associated with it.  
Or  
(b) Explain the deadlock avoidance.
13. (a) What are the different operations on process.  
Or  
(b) Define possible conditions for deadlock to access.

14. (a) Write a note on semaphores.

Or

(b) Why do we need segmentation? Explain.

15. (a) Discuss the concept of file management.

Or

(b) Explain different file access methods in detail.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)

16. (a) Describe the development towards a distributed system.

Or

(b) Describe the evaluation of operating system.

17. (a) Discuss about process description.

Or

(b) Illustrate in detail about I/O buffering.

18. (a) Explain the method of handling deadlock.

Or

(b) Explain the following:

(i) File management

(ii) I/O system management.

19. (a) Describe paging in detail.

Or

(b) Describe segmentation in detail.

20. (a) Explain about file allocation methods.

Or

(b) Write a note on

(i) Directory structure

(ii) Disk scheduling.

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