

(6 pages)

Reg. No. :

Code No. : 20995

Sub. Code : GMCS 61/
GMSE 61

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2015.

Sixth Semester

Computer Science — Main

OPERATING SYSTEM

(For those who joined in July 2012 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. _____ maintains a list of authorized users.

- (a) System Administrator
- (b) Programmer
- (c) Data entry operator
- (d) Manager

2. _____ generation computers make use of transistors.

- (a) Zeroth
- (b) First
- (c) Second
- (d) Third

3. An application process can create _____ for execution.

- (a) one thread
- (b) two threads
- (c) three threads
- (d) four threads

4. When the OS creates a process at the explicit request of another process, the action is referred to a

- (a) process creation
- (b) child process creation
- (c) process swapping
- (d) new batch job

5. The conditions of policy must be present for a deadlock

- (a) mutual exclusion
- (b) no preemption
- (c) hold and wait
- (d) all

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6. Submission of a sub request for processing to the time its result becomes available.

- (a) Throughput
- (b) Response time
- (c) Turnaround time
- (d) Service time

7. _____ is referred as the waste space of a partition due to the block of data loaded which is smaller than the partition.

- (a) Spool
- (b) Garbage
- (c) Deadlock
- (d) Paging

8. The page replacement policy which use the principle of locality of reference for its replacement decision.

- (a) FIFO
- (b) Optimal
- (c) LRU
- (d) Clock

9. In logical address space _____ are reserved for OS.

- (a) 4 G byte
- (b) 8 G byte
- (c) 2 G byte
- (d) 1 G byte

10. _____ is a data file that contains the name of the file it is linked to.

- (a) Pile
- (b) Symbolic links
- (c) Sequential
- (d) Named pipes

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PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain about system calls.

Or

(b) Explain about multiprogramming.

12. (a) Explain long-medium scheduling.

Or

(b) Write short note on PCB.

13. (a) Write short note on Monitors.

Or

(b) Deadlock prevention – Explain.

14. (a) Briefly explain memory hierarchy.

Or

(b) Discuss about kernel virtual memory.

15. (a) Write short notes on various file types.

Or

(b) What criteria are important in choosing a file organization? Briefly discuss any one file organization.

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PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain Modern operating system.

Or

- (b) Explain in detail the evolution of operating systems.

17. (a) Explain any three process scheduling algorithm.

Or

- (b) What is meant by scheduling? Explain the various types of non-preemptive scheduling.

18. (a) Explain Deadlock detection and resolution.

Or

- (b) Solve the producer-consumer problem using semaphores.

19. (a) Write any four page replacement algorithm.

Or

- (b) Explain different algorithm for page replacement policies for virtual memory.

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20. (a) List and briefly explain five file organization.

Or

- (b) Write in detail about Disk scheduling.

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