Reg. No. : ....

Code No. : 30533 E   **Sub. Code : JMCA 61/**
                                                SMCA 61

B.C.A. (CBCS) DEGREE EXAMINATION,
APRIL 2020.

Sixth Semester

Computer Application – Main

OPERATING SYSTEM

(For those who joined in July 2016 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. ———— is a program that acts as an intermediary between a user of a computer and the computer hardware.

    (a) Word   (b) Operating system

    (c) Web Server   (d) Web browser

2. ———— environment several users share the system simultaneously.

   (a) Real time system   (b) Multiprogramming

   (c) Windows OS   (d) Linux OS

3. Name process state when the process is being created

   (a) New   (b) Running

   (c) Waiting   (d) Ready

4. Each process is represented in the operating system by a

   (a) IVT   (b) Table

   (c) PCB   (d) Module

5. ———— access to shared data may result in data inconsistency.

   (a) Concurrent   (b) Time shareing

   (c) Multiprocessing   (d) Single process

6. A ———— kernel allows a process to be pre-empted while it is running in kernel mode.

   (a) Non-preemptive   (b) Preemptive

   (c) Linux   (d) Windows

7. ———— sits between main memory and CPU registers.

    (a) Magnetic tape   (b) Magnetic disk

    (c) Cache   (d) Pendrive

8. The concept of a logical address space that is bound to a separate ———— address space is central to proper memory management.

    (a) Logical   (b) Physical

    (c) Virtual   (d) RAM

9. ———— is a named collection of related information that is recorded on secondary storage.

    (a) Table   (b) Record

    (c) File   (d) Instruction

10. ———— level directory, all files are contained in the same directory.

    (a) Multi   (b) Two

    (c) Single   (d) Three

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) What are the main purposes of an operating system?

Or

(b) Mention the main differences between operating systems for mainframe computers and personal computers.

12. (a) Discuss about Process Control Block.

Or

(b) Describe the differences among short-term, medium-term and long-term scheduling.

13. (a) Illustrate the solution to Critical-Section Problem.

Or

(b) Explain the Bounded-Buffer Classical problem of synchronization.

14. (a) Explain about Contiguous memory allocation.

Or

(b) Comment on Swapping.

15. (a) Give brief note on File attributes.

Or

(b) Explain the Direct Access File methods.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Describe the abstract view of the computer system with diagram.

Or

(b) Write note Distributed systems.

17. (a) Discuss about Inter Process Communication.

Or

(b) Explain the Scheduling Criteria.

18. (a) Discuss about semaphore.

Or

(b) Write note on Dead lock.

19. (a) Explain features of Paging memory management system.

Or

(b) Describe the Architecture of Segmentation memory scheme.

20. (a) Narrate the operations performed in File.

Or

(b) Write note on Directory Structure.

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