D 92617 **(Pages : 2)** **Name**.....

Reg. No.....

THIRD SEMESTER B.C.A. DEGREE (SUPPLEMENTARY/IMPROVEMENT) EXAMINATION, NOVEMBER 2015

(UG—CCSS)

Core Course

CA 3B **04—OPERATING SYSTEMS**

Time : Three Hours **Maximum : 30 Weightage**

Answer **all** *questions.*

1. _____ contains the address of the memory location that is **to be read from or stored into.**
2. When the page is not in the memory _____ occurs.
3. _____ systems execute more jobs in the same time.
4. The state of a process after it encounters an 110 instruction is _____
5. The mechanism that brings a page into memory only **when it is needed is called** _____
6. Switching the CPU to another Process requires to save state **of the old process and loading** new process state is called _____
7. _____ is a piece of code which only one process executes at a time.
8. A program is placed in the smallest available hole in the main memory in _____ memory allocation strategy.
9. _____ provide an interface to the services made available by an operating system.
10. _____ is a recommended technique to prevent starvation.
11. The procedure of starting a computer by loading the kernel is known as _____
12. The processes that are residing in main memory and are ready and waiting to execute are kept in _____

(12 x = 3 weightage)

Answer **all** *questions.*

13. What is a process control block ?

14. What are the functions of process scheduling module ?

15. What is swapping ?

16. What is fragmentation ?

Turn over

17. What are the shortcomings of physical file system ?

18. State the 4 necessary conditions for a deadlock situation to occur ?

19. What are the different file attributes ?

20. What is single contiguous memory allocation ?

21. What are the functions of an OS as a Device Manager ?

(9 x 1 = 9 weightage)

Answer any five questions.

22. Explain virtual memory.

23. Explain how semaphore can be used to solve the readers and writers problem ?

24. Explain page replacement policies.

25. Explain directory structure.

26. How free space is managed ?

27. What is an operating system ? What are its functions ?

28. Compare and contrast Multiprogramming, Multitasking and Multiprocessing.

(5 x 2 = 10 weightage)

Answer any **two** *questions.*

29. Explain deadlock handling.

30. Explain file allocation methods.

31. Explain in detail various disk scheduling algorithms.

(2 x 4 = 8 weightage)