(6 pages) **Reg. No. : .....**

Code No. : 8918 **Sub. Code : HCAM 24**

M.C.A. (CBCS) DEGREE EXAMINATION,
APRIL 2014.

Second Semester

Computer Applications

OPERATING SYSTEMS

(For those who joined in July 2012 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. Distributed systems should ————————.
   (a) Meet prescribed time constraints
   (b) Aim better resource sharing
   (c) Aim better system utilization
   (d) Aim low system overhead

2. Fence register is used for ————————.
   (a) CPU protection (b) Memory protection
   (c) File protection (d) All of the above

3. Before proceeding with its execution, each process must acquire all the resources it needs is called ————————.
   (a) Hold and wait (b) No preemption
   (c) Circular wait (d) Starvation

4. Semaphores are used to solve the problem of ————————.
   (a) Race condition
   (b) Process synchronization
   (c) Mutual Exclusion
   (d) None of the above

5. A set of techniques that allow to execute a program which is not entirely in memory is called ————————.
   (a) Demand Paging (b) Virtual Memory
   (c) Auxiliary memory (d) Secondary memory

6. Page stealing ————————.
   (a) Is a sign of efficient system
   (b) Is taking page frames other working sets
   (c) Should be the tuning goal
   (d) Is taking larger disk space for pages out

Nesamony Memorial Christian College, Marthandam

7. SSTF stands for ————————.

(a) Shortest Seek Time First Scheduling

(b) Small Small Time First

(c) Simple Seek Time First

(d) Simple Small Time First

8. Round Robin scheduling is essentially the preemptive version of ————————.

(a) FIFO (b) FCFS

(c) FILO (d) Longest Time First

9. An incremental back up ————————.

(a) Should be done with each month

(b) User more tapes

(c) Saves all files

(d) Saves only files that have recently changed

10. Which of the following filename extension suggest that the file is a backup copy of another file?

(a) TXT (b) COM

(c) BAS (d) BAK

PART B — (5 × 5 = 25 marks)

Answer ALL the questions, choosing either (a) or (b), each answer should not exceed 250 words.

11. (a) Explain the features of Time Sharing System.

Or

(b) List the differences between Multitasking and Multiprogramming.

12. (a) Define thread and discuss the features of thread.

Or

(b) Compare User Level and Kernel Level Thread.

13. (a) Narrate the basic concepts about paging.

Or

(b) Discuss about the concet of Dynamic Linking.

14. (a) Write a detailed note on schedulers.

Or

(b) List the Criteira's available in Scheduling.

Nesamony Memorial Christian College, Marthandam

15. (a) Write a detailed note on File types and File Access.

Or

(b) Discuss in detail about i-node.

PART C — (5 × 8 = 40 marks)

Answer ALL the questions, choosing either (a) or (b), each answer should not exceed 600 words.

16. (a) Explain briefly about the types of operating system.

Or

(b) Explain the system structure of operating system.

17. (a) Explain inter-process communication using Message Passing.

Or

(b) Explain the use of Banker's algorithm for Deadlock Avoidance with illustration.

18. (a) Discuss in detail about Lazy Swapper.

Or

(b) Discuss about various page replacement strategies.

19. (a) Explain in detail about scheduling algorithms.

Or

(b) Describe in detail about the logical structure of I/O function.

20. (a) Explain File System Implementation in detail.

Or

(b) Explain the various File Allocation methods.

———————

Nesamony Memorial Christian College, Marthandam