

**Avinashilingam Institute for Home Science and Higher Education for Women  
Coimbatore – 641 043**

**Master's Degree Examination – November 2017  
III Semester**

**Class : II PG  
Major : Computer Science**

**Time: 3 hours  
Max. Marks: 60**

**12MCSC14 Operating System**

**Part A**

**10 x 1/2 = 5**

**Choose the correct answer**

1. The act of assigning a processor to the first process on the ready list is called \_\_\_\_\_  
a. Block                      b. Wakeup                      c. dispatcher                      d. quantum
2. A counting semaphore is also called as \_\_\_\_\_ semaphore.  
a. Binary                      b. General                      c. Implementing                      d. Mutual Exclusion
3. A variation of first-fit called the \_\_\_\_\_ begins each search for an available hole at the point where the previous search ended.  
a. Next-fit strategy                      b. First-fit strategy                      c. Best-fit strategy                      d. Worst-fit strategy
4. A program's data and instructions are divided into blocks called \_\_\_\_\_  
a. Page Frame                      b. Segment                      c. Memory                      d. Virtual address
5. A Scheduling discipline is \_\_\_\_\_ the system can remove the processor from the process it is running  
a. Non-Pre-emptive                      b. Dynamic                      c. Suspend                      d. Pre-emptive
6. An processor interconnection scheme consists of \_\_\_\_\_  
a. Nodes and links                      b. Nodes and switch                      c. width and links                      d. degree and width
7. A running thread enters the \_\_\_\_\_ state when it completes its task or otherwise terminates  
a. Blocked                      b. Waiting                      c. Dead                      d. Sleeping
8. Remote Procedure Call can run over either \_\_\_\_\_ or \_\_\_\_\_  
a. NFS or RMI                      b. TCP or NFS                      c. RMI or UDP                      d. TCP or UDP
9. \_\_\_\_\_ is a multitasking operating system intended for real time applications.  
a. Real Time OS                      b. Hard Real Time OS                      c. Soft Real Time OS                      d. Firm Real Time
10. A \_\_\_\_\_ in a sub-system may be seen as a fault in the global system.  
a. Fault                      b. Failure                      c. Error                      d. Case

**Part B**

**5 x 4 = 20**

**Answer ALL questions**

**Each answer should not exceed 200 words or one page**

11.a. Explain about Process State Transition

(Or)

11.b. Write notes on Semaphores

12.a. Compare Contiguous and Non-Contiguous Storage Allocation

(Or)

12.b. Give a short note on Page Replacement.

13.a. Differentiate Pre-emptive and Non-Pre-emptive Scheduling

(Or)

13.b. Express about Multiprocessing

14.a. Discuss about Client Server Model

(Or)

14.b. Describe about Scheduling in Distributed System

15.a. List Real Time Operating Systems

(Or)

15.b. Write note on Fault Tolerant scheduling.

**Part C**

**5 x 7 = 35**

**Answer ALL questions**

**Each answer should not exceed 600 words or three pages**

16.a. Describe in detail about the Process Control Blocks (PCB)

(Or)

16.b. Demonstrate about Deadlock.

17.a. Summarize on Variable Partition Multiprogramming

(Or)

17.b. Discuss about Virtual Storage Organization (VSO).

18.a. Illustrate the Scheduling Techniques

(Or)

18.b. Express about Processor Interconnection.

19.a. Summarize Remote Procedure Call (RPC).

(Or)

19.b. Discuss about Threads

20.a. Explain on Performance Measures for Real time System

(Or)

20.b. Explain about Concurrency Control Issues