

MARWARI COLLEGE RANCHI

Subject : Operating System

Full Marks : 30

Paper : X

Time : 1Hr.

MCA SEMESTER 2

Mid semester examination 2016

1. Fill in the blanks: 2 x 5 = 10
- Spooling is the process of to spool or temporary storage area in the computer memory.
 - The operating system maintains the information about each process in a record or a data structure called.....
 - Process executing concurrently in the operating system may be either or
 - A semaphore is accessed only through two standard atomic operations And
 - A system is in safe state only if there exists a

2. Answer any **TWO** questions. 5 x 2 = 10
- What is critical section? Write a short note on semaphore.
 - What are the scheduling criteria?
 - What are the goals of CPU scheduling algorithm? Explain the priority scheduling algorithm.

3. Answer any **ONE** question. 10 x 1 = 10
- Consider the following set of processes with the length of the CPU burst time given in milliseconds.

Process	Burst time
P1	10
P2	29
P3	3
P4	7
P5	12

Consider the FCFS, SJF, and RR (quantum = 10 ms) scheduling algorithm for this set of processes. Which algorithm would give the minimum average waiting time?

- Define the essential properties of following types of operating systems.
 - Batch operating system
 - Single and multi-user system
 - Real time system
 - Multiprogramming system
 - Time sharing or multitasking system.