

Accurate Institute of Management and Technology<sup>①</sup>  
Greater Noida.

MCA 1<sup>st</sup> year, 2<sup>nd</sup> Semester.

2<sup>nd</sup> Sessional Examination.

MM:30

Time: 90 min.

SECTION A

Q1 Attempt all questions. (5x2=10 Marks).

- Why communication of processes is important?
- Explain working of fork() system call.
- In what way child processes are dependent on parent processes.
- What is cascading termination? Explain Race Condition.
- What is concurrency? Explain critical section.

SECTION B

Q2 Attempt any four questions (4x3=12 Marks).

- What is the difference between lock variable of TestandSet Instruction?
- What is Bounded Buffer Problem?
- What are the different Models of process Communication? Explain.
- What is Dining philosopher problem?
- Explain Peterson's Solution. What are the important



## Conditions for Critical Section problem's Solution?

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### SECTION C

Q3 Attempt any two Questions (2x4=8 Marks).

- Explain Readers writers problem, with solution.
- Explain Semaphore and its types.
- Explain sleeping Barber's problem.