

Mid Semester Test

MCA IIIrd semester
operating system (MCA 305)
Time - ~~1 hr~~, FM = 20 Marks.

Answer any four questions

- Q1. What are the two modes of operating systems? What are their scopes of execution? (5)
- Q2. How is system call implemented in ^{software} OS when there is only one interrupt for implementing 50 system calls? Explain your answer. (5)
- Q3. An user executes the code segment:
- ```
A = 10 ;
B = 0 ;
C = A/B ;
Print(A, B, C).
```
- What should be the result of execution? How is it handled by OS? (Exception → vector handler. (5))
- Q4. How is the operating system kernel protected from the malicious user programs in multi-user environment? (5)
- Q5. Explain the following: (Any two)  $2\frac{1}{2} \times 2 = (5)$
- Fetch-execute cycle,
  - DMA cycle,
  - ~~Fetch-execute cycle.~~
  - Interrupt cycle.