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## School of Computing Science and Engineering

Bachelor of Computer Applications

Mid Term Examination - Nov 2023

Duration : 90 Minutes

Max Marks : 50

### Sem III - E1UA301B - Operating System with Linux

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Define operating system. K1 (1)
- 2) Differentiate between user threads and kernel threads. K2 (2)
- 3) Define an Operating system. Illustrate the functions of an operating system. K3 (3)
- 4) Explore semaphores. Mention its importance in operating system. K3 (6)
- 5) Explore different solutions of Dining Philosopher Problem briefly. K3 (9)
- 6) Explain Peterson's solution for achieving mutual exclusion. K4 (8)
- 7) Discuss the following: K5 (15)
  - a) Process states
  - b) Critical section
  - c) Race condition
  - d) Starvation
  - e) PCB
- 8) Distinguish between shared and exclusive lock. K6 (6)