Fifth Semester B.E. Degree Examination, Jan./Feb. 2023
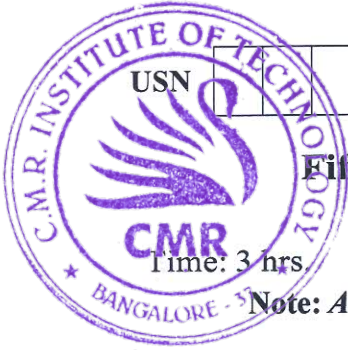## Operating Systems

Time: 3 hrs.   Max. Marks: 80

Note: *Answer FIVE full questions, choosing ONE full question from each module.*

Module-1

1   a. Explain Goals of an operating system.   (08 Marks)
    b. Explain types of computational structures with OS responsibilities.   (08 Marks)

OR

2   a. Explain Memory management approach in multi programming systems.   (08 Marks)
    b. Explain primary advantage in distributed operating systems.   (08 Marks)

Module-2

3   a. Define term process state and state transitions. Explain fundamental state transitions for process with a neat diagram.   (08 Marks)
    b. Explain in detail PCB.   (08 Marks)

OR

4   a. What are threads? Explain reasons for high process Switching overhead and Advantage of threads.   (08 Marks)
    b. Explain long, medium and short – term scheduling in a time sharing system with a neat diagram.   (08 Marks)

Module-3

5   a. Explain features of comparison between contiguous and non-contiguous memory allocation.   (08 Marks)
    b. Explain Paging and Segmentation.   (08 Marks)

OR

6   a. Explain Demand paging.   (08 Marks)
    b. Explain the functions performed by the VM handler.   (08 Marks)

Module-4

7   a. Explain IOCs and file system.   (08 Marks)
    b. Explain file protection.   (08 Marks)

OR

8   a. Explain file system actions involved in file processing in brief.   (08 Marks)
    b. Explain Linked allocation and Indexed allocation.   (08 Marks)

Module-5

9   a. Define message passing. Explain how to implement message passing.   (08 Marks)
    b. Explain Mailboxes with its advantages.   (08 Marks)

OR

10 a. Explain Deadlocks in resource allocation.   (08 Marks)
    b. Explain Deadlock prevention methods.   (08 Marks)

* * * * *