USN | | | | | | | | | | **18CS43**

Fourth Semester B.E. Degree Examination, Jan./Feb. 2021
Operating Systems

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1 a. Explain in detail about abstract view of the components of a computer system with a neat diagram. **(10 Marks)**
   b. Explain about computer system organization with a neat diagram. **(10 Marks)**

OR

2 a. Discuss briefly about operating system operations with diagram. **(10 Marks)**
   b. Discuss briefly about types of system calls with illustration. **(10 Marks)**

Module-2

3 a. Discuss in detail about multithreading models with suitable illustration. **(10 Marks)**
   b. Explain about the different scheduling criteria in process scheduling concept. **(10 Marks)**

OR

4 a. Explain in detail about multiple – processor scheduling with example. **(10 Marks)**
   b. Discuss briefly about the critical – section problem with example. **(10 Marks)**

Module-3

5 a. Discuss briefly about semaphores in sychronization. **(10 Marks)**
   b. Discuss in detail about deadlock characteristics with example. **(10 Marks)**

OR

6 a. Discuss in detail about contiguous memory allocation with illustration. **(10 Marks)**
   b. Explain in detail about paging in a memory management scheme. **(10 Marks)**

Module-4

7 a. Discuss briefly about demand – paging in memory management scheme. **(10 Marks)**
   b. Discuss briefly about file attributes in a file system. **(10 Marks)**

OR

8 a. Explain in detail about various file operations in a file system. **(10 Marks)**
   b. Explain in detail about various file types in a file system. **(10 Marks)**

Module-5

9 a. Explain in detail about over view of mass storage structure. **(10 Marks)**
   b. Discuss about design principles of LINUX system. **(10 Marks)**

OR

10 a. Discuss about process management in a LINUX system. **(10 Marks)**
   b. Explain about inter process communication in the LINUX system. **(10 Marks)**

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