AI09HF24

CBCS SCHEME

USN | | | | | | | | | | |

15EC553

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.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

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)**

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