Roll No. | | | | | | | | | | | | | **Total No. of Pages : 01**

Total No. of Questions : 08

BCA (Sem.–4)

OPERATING SYSTEMS

Subject Code : UGCA-1923

M.Code : 79727

Date of Examination : 21-06-21

Time : 2 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **Attempt any FIVE question(s), each question carries 12 marks.**

1. What do you mean by an Operating System? Explain various functions of an Operating System in detail.
2. Explain the concept of semaphores and Monitors in detail.
3. Consider the following page-reference string :

   1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6

   How many page faults would occur for the following replacement algorithms, assuming two, three frames?

   Remember that all frames are initially empty, so your first unique pages will all cost one fault each.

   • LRU replacement

   • FIFO replacement

   • Optimal replacement
4. Explain in detail the various Algorithms of Disk Scheduling with an example.
5. Explain the concept of Disk storage in detail.
6. Write a detailed note on directory structures and management.
7. What do you mean by Distributed Operating System? Explain in detail the characteristics and architecture of distributed Operating systems.
8. What do you mean by Multiprocessor Operating System? Explain its architecture and structure in detail.

Note: Any student found attempting answer sheet from any other person(s), using incriminating material or involved in any wrong activity reported by evaluator shall be treated under UMC provisions.

Student found sharing the question paper(s)/answer sheet on digital media or with any other person or any organization/institution shall also be treated under UMC.

Any student found making any change/addition/modification in contents of scanned copy of answer sheet and original answer sheet, shall be covered under UMC provisions.