

Roll No.

Total No. of Pages : 02

Total No. of Questions : 07

B.Sc. (IT) (Sem.-2)
OPERATING SYSTEMS
Subject Code : UGCA-1923
M.Code : 77655

Date of Examination : 07-06-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly :

- a) What is the relationship between operating systems and computer hardware?
- b) How buffering can improve the performance of a computer system?
- c) What are the primary differences between operating system and distributed operating system?
- d) What is the Difference between a job and a process?
- e) What are the advantages of multiprogramming?
- f) What are the two events that can cause a process to lose control of the processor?
- g) What do you understand by thrashing?
- h) What is the purpose of command interpreter?
- i) What is Virtual Memory?
- j) What is a real time operating system?

SECTION-B

2. What are the various directory structures? Explain with examples.
3. What is an operating system? What are the various components of the operating system?
4. **Explain the following page replace algorithms with examples :**
 - a) LRU
 - b) Optimal replacement
5. What are the various free space management techniques. Discuss with example
6. What is round robin scheduling? Explain by taking any example. Can it be useful for a single user system? If yes, then explain. If no, then why not?
7. A computer uses an 18 bit address system, with 6 bits used as a page address and 12 bits used as a displacement. Calculate the total number of pages and express the following address as a paging address :- 001111000000111000.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.