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 : 12-07-22

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 Round-Robin Scheduling?

   b) What is meant by Virtual Memory?

   c) What are the different principles which must be considered while selection of a scheduling algorithm?

   d) List various functions of an Operating System.

   e) Difference between Short-Term Scheduler and Medium-Term Scheduler.

   f) Briefly describe types of threads.

   g) What do you mean by Segmentation?

   h) What is the role of Kernel?

   i) What is Multiprocessor Operating System?

   j) Differentiate between Preemptive Scheduling *vs.* Non-Preemptive Scheduling.

SECTION-B

2. What is CPU Scheduling? Explain in detail the following CPU scheduling algorithms:

   a) SJF Scheduling

   b) Round Robin

   c) Multilevel Queue

3. Write a note on Paging and Segmentation scheme of memory management.

4. What is the need of Page replacement? Explain various Page replacement algorithms with help of an example.

5. List the major device management function that must be performed by an operating system. What is the disk scheduling?

6. Explain the Real time Operating Systems. Describe different characteristics of RTOS?

7. What were the factors that led to the development of virtual devices? How did the concept of virtual device evolve?