This question paper contains 3 printed pages]

# 2408

## Bachelor of Computer Application

## B.C.A. (II Year) Examination, 2019

## FUNDAMENTALS OF OPERATING SYSTEMS

### Paper-III (BCA-203)

**Time Allowed : Three Hours**

**Maximum Marks : 75**

*Attempt five questions in all, selecting one question from each Unit. All questions carry equal marks.*

*प्रत्येक इकाई में से एक प्रश्न का चयन करते हुए कुल पाँच प्रश्नों के उत्तर दीजिए। सभी प्रश्नों के अंक समान हैं।*

### Unit-I

1. (a) Explain the role of operating system as a resource manager. 7

   (b) What is the difference between single user and multiuser operating system ? Explain it with suitable example. 8



2. (a) What is a mainframe system in operating system. Explain it with example. 7

   (b) Write short notes on : 8

   (i) Real time operating system

   (ii) Handheld operating system.

### Unit-II

3. (a) Define system call. Explain in brief different types of system call. 7

   (b) What are the different types of services provided by operating system ? Explain it in detail. 8

4. Write short notes on the following : 3×5=15

   (i) Virtual machines

   (ii) System components

   (iii) System programs.

### UNIT-III

5. (a) What is a process scheduler ? State the characteristics of a good process scheduler. 7

   (b) What is scheduling ? Discuss any one scheduling algorithm. 8

https://www.uokonline.com

https://www.uokonline.com

6. What are the different principles which must be considered while selection of a scheduling algorithm ? Explain semaphores with suitable example. 15

## UNIT-IV

7. What do you mean by paging ? Explain common techniques for structured the page table. 15

8. Write short notes on the following : 3×5=15

   (*i*) Address binding

   (*ii*) Segmentation

   (*iii*) Swapping.

## UNIT-V

9. When does a page fault occur ? Explain page replacement algorithm with suitable example. 15

10. Write short notes on the following : 15

    (*i*) Thrashing

    (*ii*) Demand paging

    (*iii*) Virtual memory.



https://www.uokonline.com

https://www.uokonline.com

https://www.uokonline.com

https://pyqlelo.com