Roll No. : .....

Total No. of Questions : **11**] [Total No. of Printed Pages : **3**

SCA–267

B.C.A. Part–III Due of Part–II (Supplementary) Examination, 2022

OPERATING SYSTEM

Paper : BCA – 202

*Time : **1½** Hours*] [*Maximum Marks : **70***

Section–A **(Marks : 2 × 10 = 20)**

Note :– Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section–B **(Marks : 4 × 5 = 20)**

Note :– Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **4** marks.

Section–C **(Marks : 10 × 3 = 30)**

Note :– Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section–A

1. (i) What do you mean by Thread ?

   (ii) Define context switch.

(iii) What is Semaphore ?

(iv) What is Multitasking/Time sharing O.S. ?

(v) What is Deadlock ?

(vi) What is Synchronization ?

(vii) Define read and expr.

(viii) Define shell variable.

(ix) What do you mean by Segmentation ?

(x) Define the mkdir, pwd command.

Section–B

2. Explain the layered structure of O.S.

Or

Explain the process state.

3. Explain the scheduling criteria.

Or

Explain pre-emptive scheduling with example.

4. Explain the characteristics of Deadlock.

Or

Explain the Banker's Algorithm.

5. Explain the physical and virtual address space.

Or

What is Paging ? Explain it.

6. Explain the users and groups in Linux.

Or

Explain the decision-making statement.

Section–C

7. What is Process ? Explain the PCB (Process Control Block).

8. What is Scheduling ? Explain the FCFS, Round robin and SJF scheduling.

9. Explain the critical section requirements and its problem.

10. What is virtual memory ? Explain the concept of Page Replacement Algorithm Technique (FIFO).

11. Write a shell program to print the factorial number.