H Roll No. .....

TBC–404

B. C. A. (FOURTH SEMESTER)
MID SEMESTER EXAMINATION,
April/May, 2022

OPERATING SYSTEM

Time : 1½ Hours

Maximum Marks : 50

Note : (i) Answer all the questions by choosing any ***one*** of the sub-questions.

(ii) Each question carries 10 marks.

1. (a) Describe the following functions of operating system : 10 Marks (CO1)

(i) Process Management

(ii) Memory Management

(iii) File Management

OR

(b) Explain the following types of Operating System : 10 Marks (CO1)

(i) Batch OS

P. T. O.

(ii) Multiprocessing system

(iii) Distributed System

2. (a) List the different services provided by the operating system. 10 Marks (CO1)

OR

(b) Explain the structure of the operating system. Also describe kernel, shell and system call in detail. 10 Marks (CO1)

3. (a) Explain process scheduling queues in details. 10 Marks (CO2)

OR

(b) Write short notes in the following : 10 Marks (CO2)

(i) Job Scheduler

(ii) CPU Scheduler

(iii) Medium Term Scheduler

(iv) Dispatcher

4. (a) List the different CPU scheduling criterias. Also differentiate between Preemptive and Non-preemptive CPU scheduling.

10 Marks (CO2)

OR

(b) Differentiate between Multilevel Queue Scheduling and Multilevel Feedback Queue Scheduling algorithm.

10 Marks (CO2)

5. (a) 10 Marks (CO2)

Process	AT	Burst Time
P1	0	8 ms
P2	1	10 ms
P3	2	4 ms
P4	3	7 ms
P5	4	11 ms

Draw Gantt chart and evaluate the following parameters using FCFS and SJF :

(i) Throughput

(ii) CPU scheduling

(iii) Response time

OR

(b) 10 Marks (CO2)

Process	AT	Burst Time
P1	0	6 ms
P2	1	2 ms
P3	2	7 ms
P4	3	9 ms
P5	4	4 ms

Draw Gantt chart and evaluate the following parameters using SRTN and Round Robin (2 ms) :

(i) Average Turn Around Time

(ii) Average Waiting Time

500