

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BVOC- SEMESTER- I EXAMINATION – SUMMER 2023

Subject Code:21110204

Date:03-08-2023

Subject Name:Operating System

Time:10:30 AM TO 12:30 PM

Total Marks:50

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

- | | | Marks |
|------------|--|--------------|
| Q.1 | (a) What is Operating System? Explain any four OS services in detail. | 05 |
| | (b) Draw and explain process state model in detail. | 05 |
| Q.2 | (a) What is PCB? Explain it with diagram. | 05 |
| | (b) Explain Round Robin Scheduling algorithm using following example with Time Quanta 2. | 05 |

Process	Arrival Time	Burst Time
P1	0	5
P2	1	4
P3	2	2
P4	4	1

OR

- (b) Explain First Come First Serve Scheduling algorithm using following example. **05**

Process	Arrival Time	Burst Time
P1	0	2
P2	1	2
P3	5	3
P4	6	4

- Q.3** (a) Explain Paging technique in memory management with diagram. **05**
(b) Explain FIFO page replacement strategy using given example. **05**
1, 3, 0, 3, 5, 6, 3

OR

- Q.3** (a) Explain Fragmentation with its types. **05**
(b) Explain Optimal page replacement strategy using given example. **05**
7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 3

- Q.4** (a) Explain various file attributes and file operations in brief. **05**
(b) Apply FCFS Disk Scheduling algorithm on following requests. **05**
There are total 100 cylinder and head is currently on cylinder number 25.
55, 90, 15, 60, 5, 65, 30

OR

- Q.4** (a) Explain file allocation methods. **05**
(b) Apply SSTF Disk Scheduling algorithm on following requests. **05**
There are total 100 cylinder and head is currently on cylinder number 25.
55, 90, 15, 60, 5, 65, 30

- Q.5** (a) Explain Android mobile operating system. **05**
(b) Write a short note on antivirus. **05**

OR

- Q.5** (a) Explain iOS in brief. **05**
(b) Explain file management tool in detail. **05**
