

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER- III EXAMINATION –Summer- 2019

Subject Code: 3330701**Date: 13-05-2019****Subject Name: Operating System****Time: 02:30 PM to 05:00 PM****Total Marks: 70****Instructions:**

- 1. Attempt all questions.**
- 2. Make Suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. Use of programmable & Communication aids are strictly prohibited.**
- 5. Use of only simple calculator is permitted in Mathematics.**
- 6. English version is authentic.**

- Q.1** Answer any seven out of ten. **14**
1. List out types of operating system
 2. List out conditions for deadlock to occur
 3. List different states of process.
 4. Explain chmod command
 5. List out attributes of file.
 6. Explain race condition.
 7. List main tasks of operating tasks.
 8. Show memory hierarchy in memory management.
 9. Define IPC
 10. Differentiate absolute file path and relative file path
- Q.2** (a) Explain batch OS. **03**
- OR
- (a) Explain multiprogramming OS. **03**
- (b) Explain time sharing OS. **03**
- OR
- (b) Explain real time OS. **03**
- (c) Explain mutual exclusion **04**
- OR
- (c) Explain life cycle of process. **04**
- (d) Explain virtual memory **04**
- OR
- (d) Explain fixed size partitioning in memory management. **04**
- Q.3** (a) Explain round robin algorithm with example. **03**
- OR
- (a) Explain SRTN algorithm with example **03**
- (b) Explain cpu-bound process and i/o-bound process with example **03**
- OR
- (b) Explain preemptive and non-preemptive scheduling with example **03**
- (c) Describe external fragmentation. **04**
- OR
- (c) Describe swapping of memory management. **04**
- (d) List out disk space allocation methods. Explain any one **04**
- OR

	(d) Explain OS services.	04
Q.4	(a) Explain in brief: Linux directory structure.	03
	OR	
	(a) Explain multiprogramming with dynamic partition	03
	(b) Explain Logical structure of a disk.	04
	OR	
	(b) Explain address translation in paging.	04
	(c) Explain deadlock with example and diagram.	07
Q.5	(a) Write a shell script to find maximum of 3 numbers	04
	(b) What is paging? Explain TLB	04
	(c) List out disk space allocation methods. Explain any one.	03
	(d) Explain any three file operations.	03
