

Enrolment No./Seat No _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VI EXAMINATION – WINTER 2025

Subject Code:2160710

Date:25-11-2025

Subject Name:Distributed 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. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) List the characteristics of distributed operating system?	03
	(b) Describe the Features of Good Message Passing Systems.	04
	(c) Briefly describes the issues in designing of Distributed Operating Systems.	07
Q.2	(a) What is the difference between RMI and RPC?	03
	(b) Differentiate between DOS and NOS.	04
	(c) What is IPC? Explain the IPC in UNIX Systems.	07
	OR	
	(c) What is the significance of transparency in Distributed OS? List and explain types of transparency in brief.	07
Q.3	(a) What is the job of Server stub in RPC?	03
	(b) What is marshalling and unmarshalling?	04
	(c) What is the process migration? Explain process migration in heterogeneous system.	07
	OR	
Q.3	(a) What are the characteristics of peer to peer system?	03
	(b) What is clock skew and clock drift?	04
	(c) Briefly Discuss the architecture and server operation of NFS?	07
Q.4	(a) What is Global Name Service?	03
	(b) Explain Logical time and logical clocks.	04
	(c) Define election algorithm? Mention the different algorithm? Explain any one in detail.	07
	OR	
Q.4	(a) What is distributed shared memory? Explain.	03
	(b) Write the Key design issues for distributed file systems?	04
	(c) Describe the Desirable Features of a Good Naming System.	07

- Q.5** (a) Write notes on microkernels. **03**
(b) Differentiate Private and Public Cryptosystem. **04**
(c) Explain the design and implementation issues of Distributed Shared Memory. **07**

OR

- Q.5** (a) Explain Processes and threads. **03**
(b) How to control the concurrency in distributed system? **04**
(c) Explain potential attacks to computer systems. **07**
