



BHARATIYA VIDYA BHAVAN'S

SARDAR PATEL INSTITUTE OF TECHNOLOGY

MUNSHI NAGAR, ANDHERI (WEST), MUMBAI – 400 058, India
(Autonomous College Affiliated to University of Mumbai)

Mid Semester Examination October 2022

Max. Marks: 20

Duration: 1Hr.

Class: T. Y. IT, COMP 304

Semester: V

Course Code: IT

Subject: Distributed Computing

Instructions: (1) All questions are compulsory.

(2) Assume any necessary data but justify the same.

Q. No.	Questions	Max Marks	CO
Q. 1	What is the scalability in distributed systems? Which are the different dimensions to measure the scalability of distributed system? What are the scalability problems and solutions/techniques? Explain with example.	6 pg 10-15	CO 1
Q. 2	An experimental file server is up 3/4 of the time and down 1/4 of the time due to bugs. How many times does this file server have to be replicated to give an availability of at least 99%? Justify the answer.	4	CO 1
Q. 3	What are the main issues related to the correctness of the IPC protocol of message passing system? What are the blocking and non blocking types of IPC? Which is easier to implement and why? Write their relative advantages and disadvantages.	6 pg 117,120	CO 2
Q. 4	RMI system support object references in passing parameters in method invocation. With the help of diagram write the situations when passing an object by reference or by value.	4 pg 91-93	CO2