

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SEVENTH SEMESTER INTEGRATED MCA DEGREE EXAMINATION (R), DECEMBER 2023 (2020 SCHEME)

Course Code: 20IMCAT409

Course Name: Distributed Computing

Max. Marks: 60

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

1. What are the key differences between cluster computing and grid computing?
2. How do various distributed architectural styles differ in their design and characteristics? Explain.
3. Identify and describe the interprocess communication in which there is often no need to wait for the reply from the server.
4. Which are the different types of interfaces? Explain.
5. Illustrate the fundamental principle of forward pointers for tracking mobile entities in distributed systems.
6. Define the terms 'Identifier' and 'Name' in distributed system. How do identifier differ from names in a distributed system?
7. Discuss the reasons for implementing data replication in distributed systems.
8. Write a note about the various types of failures that can occur in distributed systems.
9. Explain client server architecture of distributed file systems.
10. Write a note on fault tolerance in distributed file system.

PART B

(Answer one full question from each module, each question carries 6 marks)

MODULE I

11. a) What is distributed system? Explain the characteristics of distributed systems. (3)
b) Illustrate the distributed information system. (3)

OR

12. a) With a neat diagram, explain centralized architecture of distributed system. (4)
b) Describe the structured peer to peer architecture. (2)

MODULE II

13. What is interprocess communication? Explain the different types of communication. (6)

OR

14. With a neat diagram describe the implementation of remote procedure call. (6)

MODULE III

15. Explain how flat names can be resolved. (6)

OR

16. a) Write a short note on structured names. (3)
b) Describe any two name resolution of structured names. (3)

MODULE IV

17. Explain data centric consistency model. (6)

OR

18. What is security? Explain the different security threats and policies. (6)

MODULE V

19. What is distributed file system? Explain the cluster based distributed file system architecture. (6)

OR

20. Elucidate the concept of replication in distributed file system. (6)
