

M.C.A.(Sem-V) April-2023

(3 Hours)

[Total Marks: 80]

- N.B.:** (1) Question No. 1 is Compulsory.
 (2) Attempt any three out remaining five questions.
 (3) Each Question carries 20 marks.

Q1) Attempt any four questions.**[20M]**

- a) What are applications of parallel computing? [5M]
- b) How does SOA Work? [5M]
- c) Explain the features of a good message passing system? [5M]
- d) Explain the Operations on files? [5M]
- e) Explain in brief Berkeley Algorithm? [5M]

Q2)

- a) What are the different types of operating systems? Discuss their advantages and disadvantages. [10M]

- b) What are the different types of distributed shared memory? [10M]

Q3) Solve any two questions

- a) Explain the advantages and disadvantages of the various commonly used models for configuring distributed computing systems? [10M]

- b) Explain what are issues in designing and implementing distributed shared memory systems? [10M]

- c) What are key characteristics of cloud computing? [10M]

Q4)

- a) Explain the concept of group communication. ? [10M]

- b) Write short note on "Classification of load-balancing algorithms" [10M]

Q5)

- a) Write a short note on transparency RPC [10M]

- b) What are different types of message-forwarding mechanisms? [10M]

Q6)

- a) Explain the Clock Synchronization Algorithms in detail? [10M]

- b) Explain the different parallel architectures in detail? [10M]
