

M.Sc. (Part-II) Semester-III (CBCS) Examination
COMPUTER SCIENCE
(Distributed Operating System) (GIS)
Paper-3 MCS-4(1)

Time : Three Hours]

[Maximum Marks : 80

Instructions to candidates

- (1) Assume suitable data wherever necessary.
- (2) Illustrate your answer with the help of neat sketches.
- (3) Use of mobile or any other programmable devices is not allowed.

1. (A) What is distributed operating system ? Describe various goals of distributed operating systems. 8
- (B) What is remote procedure call ? Describe its operation. 6

OR

2. (A) Explain the following terms : 8
- (i) Loosely synchronous system.
 - (ii) Virtual synchronous system.
- (B) Describe a blocking primitive for sending messages in client server model. 6
3. (A) Explain the concept of distributed deadlock detection. 7
- (B) Explain the Berkeley's Algorithm with example. 7

OR

4. (A) Discuss any two algorithms for ensuring the mutual exclusion in distributed system. 8
- (B) Describe the Averaging Algorithm. 6
5. (A) What is meant by a thread ? Explain how to implement the threads in user's space. 7
- (B) Explain the following terms : 6
- (i) Static scheduling
 - (ii) Dynamic Scheduling.

OR

6. (A) Describe need of scheduling. Discuss the desirable features of a good global scheduling algorithm. 7
- (B) Explain the design issues for processor allocation algorithm. 6
7. (A) What is Shared Memory ? Explain the importance of consistency in DSM. 7
- (B) Explain the architecture of distributed file system. 6

OR

8. (A) Explain the various trends in distributed file system. 7
- (B) Explain the following : 6
- (i) Replication
 - (ii) Granularity.
9. (A) Explain the Amoeba system architecture. 6
- (B) What is the role of Group Communication in Amoeba ? Explain. 7

OR

10. (A) What is Bullet server ? Explain the implementation of the bullet server. 7
- (B) Explain the memory management in AMOEBA. 6
11. (A) Explain how to send and receive messages in MACH. 8
- (B) What are the components of DCE ? 5

OR

12. (A) Explain the DTS time model. 7
- (B) Describe process management primitives in MACH. 6

