B.E. (Information Technology) Eighth Semester (C.B.S.)

Distributed Systems

P. Pages : 2 **AHK/KW/19/2464**

Time : Three Hours * 1 3 0 3 * Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Assume suitable data whenever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What the inherent limitations of distributed system? **6**

b) Describe distributed computing models. **7**

OR

2. a) Draw and explain client – server model. **7**

b) Enlist and explain the design issues in Distributed system. **6**

3. a) What the advantages and features of message passing? **6**

b) Describe in detail remote procedure call. **8**

OR

4. a) Draw and explain Remote object invocation. **8**

b) What are the disadvantages of message oriented communication? **6**

5. a) Describe causal ordering of messages and explain how it can be implemented by a system of logical clock. **7**

b) Explain Election Algorithm in detail. **6**

OR

6. Define the problem of distributed mutual exclusion. What are the performance metrics for the distributed mutual exclusion algorithms? Explain with a suitable example. **13**

7. a) Differentiate between Resources and communication. **7**

b) Explain the deadlock handling strategies in distributed system. **7**

OR

8.	a)	Explain the control organization of distributed deadlock detection.	**7**
	b)	Explain path pushing algorithm in detail.	**7**
9.	a)	What are the issues of distributed shared memory?	**7**
	b)	Write short note on Granularity.	**6**

OR

10.	a)	Describe structures of shared memory space.	**7**
	b)	What are the advantages of DSM.	**6**
11.	a)	Describe in detail the desirable features of good distributed file system.	**7**
	b)	What are the different caching methods available? Explain.	**6**

OR

12. Write short note on. **13**

i) File Replication.

ii) Fault tolerance.

iii) CORBA RMI and services.

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