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**Question Paper Code : 20424**

B.E./B.Tech. DEGREE EXAMINATIONS,  
Sixth Semester  
Computer Science and Engineering  
CS8603 – DISTRIBUTED SYSTEMS  
(regulations 2017)

Time : Three Hours

Maximum : 100 Marks

PART – A  
Answer ALL questions

**(10×2=20 Marks)**

1. List out the features of distributed system
2. Define distributed program.
3. Write application of causal order.
4. What is meant by asynchronous programming?
5. What are the condition for deadlock.
6. What is the use of wait-for-graph?
7. List types of logging.
8. What do you mean by agreement problem in distributed system?
9. Define data indexing.
10. Mention three types of consistency model in DSM ?

PART – B

**(5×13=65 Marks)**

11 a) illustrate the difference between message passing and shared memory process communication model

(or)

b) Explain how a parallel system differs from distributed system

12 a) Elucidate on the total order and causal order in distributed system with a neat diagram

(Or)

b) Explain the Chandy lamport Snapshot algorithms for FIFO channels.

13a) Explain Maekawa's algorithm for mutual exclusion in distributed system in its drawback

(Or)

b) Name and explain different types of deadlock model in distributed system with commonly used strategies to handle deadlock with neat diagram.

14 a) Describe the issues involved in a failure recovery with example..

(or)

b)List the agreement statements that should be followed in synchronous system with failure

15 a) Explain different types of overlay network with its advantage and disadvantage.

(Or)

b)Discuss the types of stronger consistency models. How do they differ from from weaker consistency model

PART – C

**(1×15=15 Marks)**

16 a) Design the procedure for causality in a synchronous execution with a suitable example.

(Or)

b)What is consistency? Differentiate between sequential and causal consistency model. Discuss the strategies employed for replacement while the shared memory gets filled with replicated or migratory data.