ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END-SEMESTER EXAMINATION: MAY 2021** (Academic Session: 2020 – 21)		
Name of the Program:	MCA	**Semester:**	IV
Paper Title:	ELECTIVE - III (DISTRIBUTED COMPUTING)	**Paper Code:**	ECS52110
Maximum Marks:	40	**Time duration:**	3 HRS
Total No of questions:	8	**Total No of Pages:**	2
(Any other information for the student may be mentioned here)			

Answer all the Groups

Group A

Answer all the questions of the following $5 \times 1 = 5$

1. a) In distributed system, each processor has its own ___ (local memory / clock / both local memory and clock / none) (1)
b) If one site fails in distributed system then ___ (the remaining sites can continue operating / all the sites will stop working / directly connected sites will stop working / none) (1)
c) Network operating system runs on ___ (server / every system in the network / both server and every system in the network / none) (1)
d) ___ (Cache coherence scheme / Computation migration / Remote procedure call / Message passing) is based on compile-time program transformation for accessing remote data in a distributed-memory parallel system. (1)
e) Logical extension of computation migration is ___ (process migration / system migration / thread migration / data migration) (1)

GROUP –B

Answer *any three* of the following $3 \times 5 = 15$

2. a) What is mutual exclusion in distributed systems? (2)
b) What do you mean by token based and non-token based algorithms? (3)

3. What are the differences between CPU scheduling and load scheduling? (5)

4. Briefly explain the token passing Suzuki-Kasami algorithm. (5)

5. Briefly describe the different components of access transparency. (5)

GROUP –C

Answer *any two* of the following $2 \times 10 = 20$

6. Write short notes on ANY ONE of the following: (10)
a) Lamport's algorithm
b) Ricart-Agrawala Algorithm

c) Maekawa's Algorithm

7. a) What is deadlock in distributed systems? (2)
b) Explain the different conditions for deadlock. (8)

8. Elaborate synchronization and its role in distributed systems. (10)

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