SRM Institute of Science and Technology
College of Engineering and Technology
School of Computing

Mode of Exam
OFFLINE – SET B

DEPARTMENT OF COMPUTING TECHNOLOGIES

SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamilnadu

Academic Year: **2022-2023** **(ODD/EVEN): ODD**

Test: CLAT-1 **Date: 03-08-2022**
Course Code & Title: 18CSE356T - DOS **Duration: 1 Hour**
Year & Sem: IV & VII **Max. Marks: 25**

**Course Articulation Matrix:** *(to be placed)*

Part - A
(15 x 1 = 15 Marks)

Instructions: Answer all

Q. No	Question	Marks	BL	CO	PO	PI Code
1	_____ is the design issue which hides all the distribution from user and from the application programs. a. Fault tolerance b. Scalability **c. Transparency** d. Flexibility	1	1	1	1	1.6.1*
2	_____ (computer/system) hardware category does not exist in real time. a. SIMD b. MIMD c. SISD **d. MISD**	1	1	1	1	1.6.1*
3	_____ maintains information on millions of computers worldwide and forms an essential service for locating Web servers. a. NOS b. DOS **c. DNS** d. WWW	1	2	1	1	1.6.1*
4.	True distributed system supports a. Loosely coupled hardware and loosely coupled software b. Tightly coupled hardware and loosely coupled software c. Tightly coupled hardware and tightly coupled software **d. Loosely coupled hardware and tightly coupled software**	1	2	1	1	1.6.1*
5.	Reliability is dependent on _____ a. Transparency and scalability b. Flexibility and Performance c. Scalability and data sharing **d. Security, Availability and Fault Tolerance**	1	2	1	1	1.6.1*
6.	_____ Feature hide that a resource may be shared by several competitive users. a. Replication transparency **b. Concurrency transparency** c. Location transparency d. Migration transparency	1	3	1	1	1.6.1*
7.	In multi computers, each machine has _____ memory. **a. Private** b. Shared c. Virtual d. Partitioned.	1	3	1	1	1.6.1*
8.	A single address space among the processors is known as _____. a. Uniprocessor **b. Multiprocessor** c. Standalone(single) system d. Multicomputer	1	3	1	1	1.6.1*

9.	Resources free to move without changing their names is what type of transparency?
	   a. Location
	   b. Migration
	   c. Replication
	   d. Concurrency
		1	3	1	1	1.6.1*

10.	Which is not a Advantages of Distributed systems are
	   a. Data and device sharing
	   b. Incremental Growth and Speed
	   c. Security
	   d. Reliability and flexibility
		1	2	1	1	1.6.1*

11.	Match the following 	Non-Uniform Memory Access [NUMA]	It does routing based on complete information
Grid Computing Systems	Used to achieve geographical scalability
Hiding communication latencies	Better average access time than machine based on omega networks

Centralized algorithms	Heterogeneous in nature |
	
	   i. a- 1, b-3, c- 4, d-2
	   ii. a- 3, b-1, c- 2, d-4
	   iii. a- 1, b-4, c- 3, d-2
	   iv. a- 3, b-4, c- 2, d-1
		1	1	1	1	1.6.1*

12.	To simplify programming the high-level transaction fork off children that run in parallel with one another, on different machines, this concept is called _____. a. **Nested Transaction** b. Complete Transaction c. Partial Transaction d. Transaction Monitor	1	1	1	1	1.6.1*

13.	Which among the given statements is NOT TRUE about Distributed system
	   i) Allows many users to access the common database
	   ii) Designing and implementing distributed software is easy.
	   iii) Communication is well handled in distributed system.
	   iv) Allow users to share expensive peripherals.
	   a) i and ii only
	   b) ii and iii only
	   c) i,ii and iv only
	   d) All are true
		1	2	1	1	1.6.1*

14.	In the Architecture for Grid Computing Systems, _____ layer deals with handling access to multiple resources and typically consists of services for resource discovery.
	   a. Application Layer
	   b. Collective Layer
	   c. Connectivity Layer
	   d. Resource layer
		1	2	1	4	1.6.1*

15.	To connect n-CPUs and n-Memory modules, _____ Crosspoint switches are required.
	   a. $n \log n$
	   b. n^2
	   c. $\log_2 n$
	   d. $(n \log_2 n)/2$
		1	2	1	1	1.6.1*

Part – B
(2 x 5 = 10 Marks)

Instructions: Answer all

| 1 | Justify the need for various transparencies in distributed systems with suitable examples.

   •   The concept of transparency can be applied to several aspects of a distributed system.

     a) Location transparency: The users cannot tell where resources | 5 | 3 | 1 | 1 | 1.6.1* |

	(h/w and s/w) are located **b) Migration transparency:** Resources can free to move without changing their names **c) Replication transparency:** The users cannot tell how many copies exist. **d) Concurrency transparency:** Multiple users can share resources automatically. **e) Parallelism transparency:** Activities can happen in parallel without users knowing.					
2	Differentiate multiprocessor and multicomputer and its types. Fig. 1-4. A taxonomy of parallel and distributed computer systems. Bus Based Multiprocessor and Multi computers Switch Based Multiprocessor and Multi computers	5	3	1	1	1.6.1*

*Performance Indicators are available separately for Computer Science and Engineering in AICTE examination reforms policy.

Course Outcome (CO) and Bloom's level (BL) Coverage in Questions
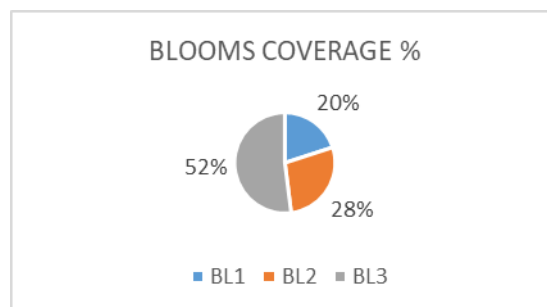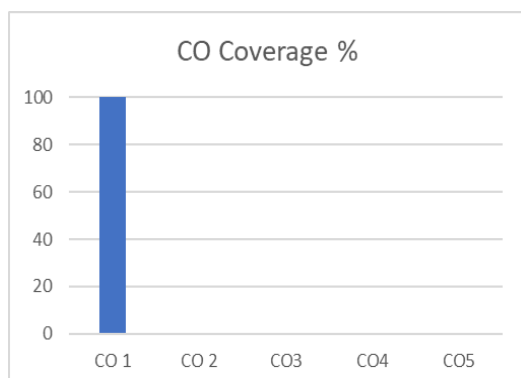
Prepared By   **Approved by the Audit Professor/Course Coordinator**