PRESIDENCY UNIVERSITY

BENGALURU

School of Computer Science and Engineering
Mid - Term Examinations - November 2024

Semester: V

Course Code: CSE2054

Course Name: Storage Area Networks

Program: B. Tech

Date: 07-11-2024

Time: 02.00pm to 03.30pm

Max Marks: 50

Weightage: 25%

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2 marks.   **5Qx2M=10M**

1	Recall connectivity with its physical disk components.	2 Marks	L1	CO 1
2	Define RAID and Name the two methods of RAID Implementation.	2 Marks	L1	CO1
3	Classify the different kinds of storage media available?	2 Marks	L2	CO1
4	Differentiate between Hardware RAID and Software RAID.	2 Marks	L2	CO2
5	List the key functions of the RAID controllers.	2 Marks	L1	CO2

Part B

Answer ALL Questions. Each question carries 10 marks.   **4QX10M=40M**

6	a.	Explain RAID 0 and RAID 1?	5 Marks	L2	CO1
	b.	Define Read Cache Hit and Cache Miss.	5 Marks	L1	CO1

or

7	a.	Explain the advantages and disadvantages of IP-storage in relation to the FC?	5 Marks	L3	CO1

	b.	Define the terms: a. Device Driver b. Logical Volume.	5 Marks	L1	CO1
8	**a.**	Describe the Seek Time, Rotational Latency, Access time	5 Marks	L2	CO2
	b.	Explain the key characteristics of a data centre.	5 Marks	L2	CO2

or

9	**a.**	Discuss the Least Recently Used and Most Recently Used algorithms.	5 Marks	L2	CO2
	b.	Differentiate between Write- through and Write- back cache?	5 Marks	L2	CO2
10	**a.**	Explain the following: RAID 1, RAID 3	5 Marks	L2	CO2
	b.	List the key functions of the RAID controllers.	5 Marks	L1	CO2

or

11	**a.**	Describe the key characteristics of data center and tasks involved in managing the data center with the help of a neat diagram.	5 Marks	L2	CO2
	b.	Distinguish the principle of operation in RAID 0+1 and RAID 10 level?	5 Marks	L2	CO2
12	**a.**	Demonstrate virtualized data center by virtualizing components of data center.	5 Marks	L2	CO1
	b.	Discuss Logical Volume Management in detail.	5 Marks	L2	CO1

or

13	**a.**	Define server centric IT architecture and storage centric IT architecture with advantages and limitations.	5 Marks	L1	CO1
	b.	State the Compute virtualization in detail and its benefits.	5 Marks	L1	CO1

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