R20 Regulation *Subject code: 3E8FB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VIII Semester Supplementary Examinations, May 2026

STORAGE AREA NETWORKS

(IT)

Maximum Marks: 70 Date: 06.05.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	Define unstructured data.	2M	1	L1
2	What is information storage?	2M	1	L1
3	Name some storage protocols used in SANs.	2M	2	L1
4	What are the three main types of SAN architectures?	2M	2	L1
5	What are the essential components of a NAS system?	2M	3	L1
6	How does NAS handle input/output (I/O) operations?	2M	3	L1
7	What are the common backup methods used in SANs?	2M	4	L1
8	Name some common local replication technologies used in SANs.	2M	4	L1
9	What does the risk triad consist of?	2M	5	L1
10	What are the key components of storage security domains?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	a) Explain Types of Intelligent Storage Systems. b) Explain about Flash Drives.	5M 5M	1	L2
	OR			
12	With a neat diagram, explain the structure of read and write operations in cache. With a neat diagram, explain ISS, explain in detail the cache component of ISS.	10M	1	L2
13	Describe block, file, and object SAN architectures, including their advantages and limitations.	10M	2	L2
	OR			
14	Compare the performance, scalability, and cost considerations between Fiber Channel and iSCSI.	10M	2	L2
15	Compare NFS (Network File System) and SMB (Server Message Block) protocols for NAS file sharing.	10M	3	L2
	OR			
16	Discuss content-addressed storage (CAS), use cases, and the concept of unified storage that combines file and block storage.	10M	3	L2

17	Discuss the challenges and techniques involved in maintaining consistent data between the source and its replicas.	10M	4	L2
	OR			
18	Describe the mechanisms (such as copy-on-write or log-based tracking) used to efficiently synchronize changes.	10M	4	L2
19	Describe the importance of defining and segregating storage security domains within a SAN environment.	10M	5	L2
	OR			
20	Explain FCSCAN security architecture with a neat diagram.	10M	5	L2