

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATION-2025

B.Tech-7th Semester (CSE/IT)

COURSE CODE (CREDITS): 18B1WCI736(3)

MAX. MARKS: 35

COURSE NAME: Storage Networks

MAX. TIME: 2 Hours

COURSE INSTRUCTORS: Dr Pankaj Dhiman, Mr. Akshay Kumar

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	CO	Marks
Q1	Explain the different I/O cabling methods used in disk subsystems. Which cabling method is generally preferred in modern storage systems, and why?	2	5
Q2	Explain the concepts of instant copy and remote mirroring in intelligent disk subsystems. Clearly state how these two mechanisms differ in purpose and operation.	2	5
Q3	Explain the concept of zoning. Describe its main types and compare them in terms of functionality and management requirements.	3	5
Q4	Explain the concept of storage virtualization and its types. Summarize the SNIA taxonomy for storage virtualization and outline the major functional differences among its layers.	4	5
Q5	Differentiate between out-band and in-band management in storage networks. Provide a concise comparison based on communication path, protocol use, and reliability.	4	5
Q6	Explain data deduplication and its major types. Describe the general workflow of a deduplication system and briefly show how it improves storage efficiency using a real-life scenario (e.g., cloud backups or email servers).	5	5
Q7	Compare the architecture of ESCON/Fibre Channel over MAN using Link Extenders with ESCON/Fibre Channel over MAN using point-to-point WDM, highlighting the major technical differences.	6	5