

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

B.Tech-VII Semester (CSE & IT)

COURSE CODE (CREDITS): 18B1WCI736 (3)

MAX. MARKS: 15

COURSE NAME: STORAGE NETWORKS

COURSE INSTRUCTORS: Dr. P.K. Gupta

MAX. TIME: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. Let the following data be written to the physical disk drives: [CO1] [3]

Drive #1: 00101010 (Data)
Drive #2: 10001110 (Data)
Drive #3: 11110111 (Data)
Drive #4: 10110101 (Data)
Drive #5: ----- (Hot Spare)
Drive #6: ----- (Parity)

Every time data is written to the data drives, a parity value is calculated in order to be able to recover from a physical drive failure. Calculate the parity block from the above given information and where this block will be stored, and Why?

Q2. Design the following RAID levels and calculate their available capacity: (ANY TWO) [CO2] [3]

- a) RAID 100
- b) RAID 55
- c) RAID 60

Q3. On the basis of characteristics, functions & role, compare the following: [CO1] [3]
(ANY TWO)

- a. Class 1, Class 3 & Class F services of Fibre channel.
- b. NL – Port, FL – Port, E – Port and B – Port.
- c. FC 0, FC1 and FC3 layers of Fibre channel protocol stack.

Q4. Applications may require different levels of service and guarantees with respect to **delivery, connectivity, and bandwidth**. List the various classes of service support these tasks. Which class of service is preferred mostly and why? Explain. [CO3] [3]

Q5. Explain the role of frame header in frame. How much transmission words are occupied by frame header and also list the various fields and their roles which make the structure of frame header. Support your answer with proper diagram. [CO3] [3]