JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-2 EXAMINATION (APRIL 2019)
B-Tech (8TH SEM)

Course Code: 11B1WCI835   Max. Marks: 25
Course Name: STORAGE NETWORKS   Max. Time: 1 HRS 30 MIN.
Course Credit: 3

Note: All questions are compulsory.

Q1. Attempt all questions   [5x1 =5]

    a) Find the basic operations of storage controller.

    b) Calculate the available capacity of a RAID 51 if the total no. of disks are 10 and each disk capacity varies from 2000 GB to 8000 GB.

    c) Find the conceptual difference between functioning of iSCSI and iFCP protocol.

    d) Which class of service is called isochronous and intended for applications that require immediate delivery of data (with no buffering)?

    e) List the various block oriented protocols used at application level in storage networks?

Q2.

    a) Explain the significance of term, the **FCoE**. Which protocol is best suited to explain the functionality of FCoE? Differentiate the role of this protocol with the other protocols that falls into the same category of storage area network.   [3]

    b) How Infiniband support the fast data transfer rate? Explain its architecture.   [2]

Q3.

    a) Explain the role of command descriptor block and protocol data unit in iSCSI. In what way execution of iSCSI is different with iFCP.   [4]

    b) If we greatly simplify the OSI reference model then we can broadly divide the protocols for storage networks into three layers that built upon one another. What are these three layers? Also list the various protocols that falls under these layers. A diagram may be suitable for your answer.   [4]

Q4.

a) What are the various Fibre channel topologies and components that participate in designing of SAN? Explain any one topology used mostly and why? **[3]**

b) 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. **[2+2]**