GIET UNIVERSITY, GUNUPUR – 765022
B. Tech (Fifth Semester – Regular) Examinations, December – 2022
BPECS5052 / BPECT5052 – Information Storage and Management
(CSE / CST)

Time: 3 hrs   Maximum: 70 Marks

Answer ALL Questions
The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions)   **(1 x 10 = 10 Marks)**

Q.1. Answer *ALL* questions   [CO#]   [PO#]

a. Using file access protocols, data residing on which of the following can be accessed   CO1   PO2
   (i) Local disk   (ii) Remote disk
   (iii) Neither   (iv) Both

b. What is the most basic level of storage   CO1   PO1
   (i) SAN   (ii) DAS
   (iii) NAS   (iv) ISCSI

c. Pick the false statement about RAID 0   CO2   PO2
   (i) Provides no redundancy   (ii) Provides data striping
   (iii) improves performance   (iv) Provides fault tolerance

d. Pick the wrong statement about the hard disk drive?   CO1   PO2
   (i) Hard disk has multiple platters and each platter has two read/write heads   (ii) It's a non-volatile & random-access storage device
   (iii) Data Transfer rate is over 80 MBPS   (iv) Hard disk can only have IDE or USB interface

e. File access protocols operate in which layer of the OSI model   CO2   PO2
   (i) Application   (ii) Session
   (iii) Transport   (iv) None

f. Which of the following provides byte level striping?   CO3   PO3
   (i) RAID 6   (ii) RAID 4
   (iii) RAID 2   (iv) RAID 5

g. Identify a network file protocol in the below mentioned set.   CO3   PO4
   (i) SCSI   (ii) CIFS
   (iii) NAS   (iv) FC

h. Which is the file sharing protocol?   CO3   PO3
   (i) Telnet   (ii) FTP
   (iii) CIFS   (iv) HTTP

i. Pick the false statement   CO2   PO2
   (i) RAID Level 1 provides disk mirroring   (ii) RAID Level 2 provides bit level striping with Hamming code ECC
   (iii) RAID Level 4 provides block level striping   (iv) RAID Level 5 provides block level striping and error correction information

j. In SAN storage model, the operating system view storage resources as —   CO3   PO3
   (i) FC   (ii) SAN
   (iii) SCSI   (iv) None of the mentioned

PART – B: (Short Answer Questions)   **(2 x 10 = 20 Marks)**

Q.2. Answer *ALL* questions   [CO#]   [PO#]

a. Describe the factors of Information Availability?   CO3   PO3

b. Discuss the 6 FC Ports?   CO3   PO4

c. Discuss the BC Technology Solutions?   CO4   PO5

d. Discuss the Components of NAS?   CO3   PO3

e. Discuss the components which make up intelligent storage systems?   CO2   PO2

f. Discuss the 3 components of ISCSI?   CO3   PO4

g. Discuss the components of RAID Array?   CO4   PO5

h. Discuss the benefits of FC SAN?   CO2   PO3

i. Discuss the ISCSI Session Intentions?   CO3   PO4

j. Describe the 3 factors related to IA ?   CO3   PO2

PART – C: (Long Answer Questions)   **(10 x 4 = 40 Marks)**

Answer *ALL* questions   Marks   [CO#]   [PO#]

3. a. Briefly Explain about Different RAID Levels?   5   CO1   PO1

   b. Explain the core Elements of Data center?   5   CO1   PO1

                              (OR)

   c. Explain the types of backup Granularities?   5   CO4   PO4

   d. Describe the benefits of NAS environment?   5   CO4   PO4

4. a. Explain the Components of Intelligent Storage System?   5   CO2   PO2

   b. Explain the Virtuous Cycle of Information?   5   CO1   PO1

                              (OR)

   c. Describe the various File Sharing Protocols of NAS?   5   CO2   PO2

   d. Briefly Explain about the various ways of Failure Analysis? 5   CO4   PO4

5. a. Describe the 2 different NAS Implementations?   5   CO2   PO2

   b. Explain various backup purposes?   5   CO4   PO4

                              (OR)

   c. Explain the Components of SAN?   5   CO3   PO3

   d. Describe Backup in NAS Environment?   5   CO2   PO2

6. a. Explain the Components of IP-SAN?   5   CO3   PO4

   b. Describe the Phases of BC Planning Lifecycle?   5   CO4   PO5

                              (OR)

   c. Describe the interconnectivity options of FC architecture? 5   CO3   PO3

   d. Explain the iSCSI Protocol Stack with diagram?   5   CO4   PO4

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