Name:	
Enrolment No:	**UPES** UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2020

Course: Storage Technology Foundation   **Semester: 8**
Program: BT-CSE-Spz-OSSOS-VIII   **Time 03 hrs.**
Course Code: CSIB 255   **Max. Marks: 100**

Instructions:

	SECTION A		
S. No.		**Marks**	**CO**
Q 1	The temporary memory of computer is a) ROM b) Secondary Memory c) Primary Memory d) RAM	**2**	**CO1**
Q 2	The most important attribute of information quality that a manager requires is: (a) relevance (b) media (c) presentation (d) timeliness	**2**	**CO1**
Q 3	Which of the following is not a technology driver for an information system? (a) enterprise application (b) object technologies (c) knowledge asset management (d) networks and the Internet	**2**	**CO1**
Q 4	Drive access time is measured in (a) nanoseconds (b) milliseconds (c) microseconds (d) picoseconds	**2**	**CO1**
Q 5	File type can be represented by (a) file name (b) file extension (c) file identifier (d) file type	**2**	**CO1**
Q 6	What is the minimum number of disks required for RAID 1? (a) 1 (b) 2 (c) 3 (d) 4	**2**	**CO2**
Q 7	What components on SAN can be virtualized (a) Disk (b) Tape Drive (c) Tape Library (d) All of the mentioned	**2**	**CO2**
Q 8	File system is created using command (a) mkfs (b) Format (c) fsck (d) defrag	**2**	**CO2**
Q 9	Dirty buffer cache contains (a) Invalid data (b) New valid data (c) File (d) Inode	**2**	**CO2**
Q 10	An Inode represents (a) Buffer (b) Data (c) Files & Directories (d) None of these	**2**	**CO2**
Q 11	Journaling is preferred for (a) Faster file system recovery (b) Faster write operation (c) Storing logs (d) Storing metadata	**2**	**CO2**
Q 12	Examples of Journaling file system (a) Ext2 (b) Ext3 (c) UFS (d) JFS	**2**	**CO2**
Q 13	Who determines the WWN of FC end point (a) Vendor (b) Fabric controller (c) Node/Loop ports participating in the FC connection (d) None of the mentioned	**2**	**CO2**

Q 14	What are the demerits of DAS? (a) Interconnect limited up to 10 km (b) Excessive network traffic (c) Distance limitation and slow speed (d) Distance limitations and inability to share data with other servers	2	CO3
Q 15	iSCSI allows what type of access (a) block level (b) file level (c) both block level and file level (d) None	2	CO3
Q 16	What are the major benefits of SAN? (a) Centralized backup (b) Storage consolidation (c) LAN-less backup (d) All the mentioned	2	CO3
Q 17	In FCP (FC protocol for SCSI), which of the following phases is not mandatory for read type commands? (a) Command phase (b) Data phase (c) Transfer ready phase (d) Response phase	2	CO3
Q 18	Which component of the FC frame header has details about the ULP? (a) Routing Control (b) Class specific control (c) Type field (d) Data field control	2	CO3
Q 19	To increase the distance of a fiber you will use (a) HBA (b) FC switch (c) Repeaters (d) Media Interface Adapters	2	CO3
Q 20	What will be used by SAN to provide connectivity between hosts and storage? (a) FC (b) iSCSI (c) FC or iSCSI (d) SCSI	2	CO4
Q 21	Which field of the frame header signifies the presence of optional header? (a) Routing control (b) Data field control (c) Frame control (d) CRC	2	CO4
Q 22	Identify a network file protocol in the below mentioned set. (a) FC (b) CIFS (c) SCSI (d) NAS	2	CO4
Q 23	Identify the data storage technology used in the data center? (a) NAS (b) SAN (c) DAS (d) None of the mentioned	2	CO4
Q 24	Which data storage technology offers the best performance? (a) SAN (b) NAS (c) DAS (d) None	2	CO4
Q 25	Without this practice, backing up data is virtually useless. (a) Data Archival (b) Data Retrieval (c) Data quality assurance (d) Data Recovery	2	CO5
Q 26	Which of the following qualifies as best disaster recovery (DR) site? (a) DR site in the same campus (b) DR site in the same city (c) DR site in the same country (d) DR site in a different country	2	CO5
Q 27	Backup of the source data can be created (a) On the same device (b) On another device (c) At some other location (d) All the mentioned	2	CO5
Q 28	Which of the following backup technique is most space efficient? (a) Full backup (b) Incremental backup (c) Differential backup (d) All of the mentioned	2	CO5
Q 29	This is the activity of copying files or databases so that they will be preserved in case of equipment failure or other catastrophe. (a) Snapshot (b) Replication (c) Archival (d) Backup	2	CO5
Q 30	There are endless rules and regulations in this area of storage technology. (a) Data protection (b) Data Storage Management (c) Database Management (d) Meta data management.	2	CO5

SECTION B			
Q 1	Categorize data into different category and explain various key information management challenges. or Explain how information availability is important to user. Analyze the challenges of information management?	**10**	**CO1**
Q 2	Identify various physical elements of DAS? Explain all the logical attributes of DAS. or Identify all the three principal topologies of Fiber Channel and discuss them in detail.	**10**	**CO3**
Q 3	Explain the terms FCIP, iFCP and iSCSI. Also write the comparison between these three.	**10**	**CO4**
Q 4	How business continuity planning (BCP) helps in risk management? Discuss its complete lifecycle.	**10**	**CO5**