

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, May 2018**

**Course: Storage Technology and Foundation/CSIB255**  
**Program: B.Tech. CS- CCVT & IT Infra.**

**Semester: IV**

**Time: 03 hrs.**

**Max. Marks: 100**

**Instructions: Students are supposed to assume any missing data and has to give examples/draw diagrams wherever applicable**

**SECTION A [ 20 Marks]**

S. No.		Marks	CO
Q1	What are the core elements of data center that support business activities of the organization?	4	CO1
Q2	Why you will not prefer DAS for UPES data centre?	4	CO2
Q3	Storage systems has its own cache. Why?	4	CO3
Q4	Illustrate the RAID implementation in SAN.	4	CO4
Q5	How you can maintain business continuity. Illustrate in detail	4	CO5

**SECTION B [40 Marks]**

Q6	What are the different types of Backup Granularity? Recommend with different cases?	10	CO4 + CO5
Q7	Illustrate various storage technologies and its architecture.	10	CO2+ CO3
Q8	Relate different DAS connectivity options with a proper diagram and discuss.	10	CO1+ CO2
Q9	Analyze the problems raised while dealing with unstructured data and explain	10	CO1

**SECTION-C [40 Marks]**

**Note\* Q10 is compulsory and attempt any one question from Q11 and Q12**

Q10	Business continuity is the preparation and responsiveness for the recovery of an application outage. Such outage/downtime can adversely affects business operations. To maintain the business continuity many solutions proposed for backup and restore. Explain how backup/recovery process can be implemented for 24X7 uptime of IT services	20	CO1,C O2,CO 3,CO4 CO5
Q11	You have been deputed the role of IT Manager at UPES. What is your core responsibility in managing and monitoring UPES data Centre? Discuss and explain with proper examples.	20	CO1,C O2,CO 3,CO4 CO5

**OR**

Q12	<i>UMBRELLA CORPORATION</i> is considering to deploy a storage infrastructure – The infrastructure must be scalable and with high uptime. <i>UMBRELLA CORPORATION</i> also needs robust performance for all its mission-critical applications. Which storage topology would you recommend (SAN, NAS, IP SAN) and why? Discuss, compare and elaborate with diagram.	20	CO1,C O2,CO 3,CO4 CO5
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