

<b>Name:</b>	 <b>UPES</b> UNIVERSITY WITH A PURPOSE
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**  
**End Semester Examination (Online) – May, 2021**

**Program: BBA-ABD**  
**Subject/Course: DATA MANAGEMENT**  
**Course Code: CSEG 2019**

**Semester: IV**  
**Max. Marks: 100**  
**Duration: 3 Hours**

**SECTION A**

- 1. Each Question will carry 5 Marks**  
**2. Instruction: Write short / brief notes.**

S.No	Question	CO
Q1.	What are the main costs of using a DBMS? When do you feel it is not necessary to have a database management system	CO1
Q2.	Datawarehouse is a product or an environment? Explain	CO4
Q3.	Explain the concept of database schemas and instances with example.	CO1
Q4.	Describe the different types of attributes used in E-R Modeling, giving examples for each	CO3
Q5.	Explain the role of the Database Administrator (DBA).	CO2
Q6.	Construct an ER diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted	CO3

**SECTION B**

- 1. Each question will carry 10 marks**  
**2. Instruction: Write long answer**

Q7.	Explain Data Mining, and the steps involved in the data mining process	CO4
Q8.	Briefly explain the levels of Database architecture using a diagram. How does this architecture help in achieving data independence?	CO2
Q9.	Explain the essential characteristics of cloud computing and features of SaaS.	CO5
Q10.	<p>Consider a university database for scheduling rooms for final exams. This database could be modelled as consisting of these entity sets:</p> <p>exam with attributes exam-id and time.  course with attributes name, department, and c-number  section with attributes s-number and enrollment, and dependent on the entity set course  room with attributes r-number, capacity, and building.</p> <p><b>Draw an E-R diagram for this database, showing the entities and relationships involved</b></p>	CO3
Q11.	<p>Explain the Map Reduce Concept, its working and how it is related to HDFS?</p> <p style="text-align: center;">OR</p> <p>Explain the term Big Data, its data types and define the five V's of Big Data.</p>	CO5

**SECTION C**

**1. Section C carries 20 marks**

Q12.	<p>Design the Star Schema for the SALES ANALYSIS of a company with the dimension tables as TIME, BRANCH, ITEM and LOCATION. Explain the different types of Star Schema keys and the advantages of Star Schema.</p> <p>Also explain the Snowflake Schema and draw it using a relevant example. How does it differ from the Star Schema? Also explain the different components of a Data Warehousing system with the aid of a diagram.</p>	CO4
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**ANSWERS**