Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2019

Course: Banking Database & Structure — **Semester: VI**
Program: B.Tech CSE+BFSI — **Time: 03 hrs.**
Course Code: CSIB 332 — **Max. Marks: 100**

Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Discuss Database System Environment. List down some industries which are using DBMS.	4	CO1
Q 2	Differentiate between Reference Data and Meta Data with example.	4	CO3
Q 3	Define Data Model and its usage. List down the types of data models.	4	CO1
Q 4	Differentiate between Data Warehouse and Big Data with example.	4	CO3
Q 5	Write down data protection principles.	4	CO4

SECTION B

Q 6	Discuss key technologies involved in storing big data. Illustrate legal requirements of data storage.	5+5=10	CO4
Q 7	Analyze and explain architecture of Core banking Enterprise System view and its components with diagram.	10	CO2
Q 8	Recognize the importance of data archiving and backup. Illustrate data protection law in India.	10	CO4
Q 9	Draw and explain IBM Info Sphere MDM functionality and architecture. OR Analyze IBM SPSS. Describe its application in different public and private sectors.	10	CO 3

SECTION-C

Q 10	(a) Define batch processing. Explain Info Sphere MDM Custom Domain Hub J2SE batch Processor framework and architecture. (b) Write down short notes on data storage techniques. OR Explain Market basket Analysis. Implement Apriori Algorithm for given data set and find the most frequent data item set for maximum data set pairs. It is given that Min_Support = 4	**(5+10)** **(5)** **OR** **10+10=20**	**CO4**
Q 11	Explain the Naïve Baysian Classification Algorithm. With the help of given table, for the day <**sunny, cool, high, strong**>, what's the play prediction?	**10+10=20**	**CO5**

Transaction ID	milk	Bread	butter	beer
1	1	1	0	0
2	0	1	1	0
3	0	0	0	1
4	1	1	1	0
5	0	1	0	0
6	1	0	0	0
7	0	1	1	1
8	1	1	1	1
9	0	1	0	1
10	1	1	0	0
11	1	0	0	0
12	0	0	0	1
13	1	1	1	0
14	1	0	1	0
15	1	1	1	1

Day	Outlook	Temperature	Humidity	Wind	Play Tennis
Day1	Sunny	Hot	High	Weak	No
Day2	Sunny	Hot	High	Strong	No
Day3	Overcast	Hot	High	Weak	Yes
Day4	Rain	Mild	High	Weak	Yes
Day5	Rain	Cool	Normal	Weak	Yes
Day6	Rain	Cool	Normal	Strong	No
Day7	Overcast	Cool	Normal	Strong	Yes
Day8	Sunny	Mild	High	Weak	No
Day9	Sunny	Cool	Normal	Weak	Yes
Day10	Rain	Mild	Normal	Weak	Yes
Day11	Sunny	Mild	Normal	Strong	Yes
Day12	Overcast	Mild	High	Strong	Yes
Day13	Overcast	Hot	Normal	Weak	Yes
Day14	Rain	Mild	High	Strong	No

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Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Differentiate between ER Model and Data Model.	**4**	**CO1**
Q 2	Define DBMS and write down the components of it.	**4**	**CO4**
Q 3	Define metadata. In banking system which type of metadata is useful?	**4**	**CO3**
Q 4	List down Magnetic Storage and Semiconductor Memories.	**4**	**CO3**
Q 5	Differentiate between Supervised and Unsupervised Learning with example.	**4**	**CO5**

SECTION B

Q 6	Recognize the importance of data modelling in core banking solutions.	**10**	**CO1**
Q 7	Write down challenges of Core Banking Solution. Draw and explain Customer Data Model.	**3+7**	**CO2**
Q 8	Discuss BIG Data. Illustrate and explain BIG Data key technologies.	**2+8**	**CO3**
Q 9	Explain key technologies involved in storing big data. What is legal requirements of data storage? OR Illustrate and outline InfoSphere MDM with distinct technologies.	**10**	**CO4**

SECTION-C

Q 10	Analyze and explain IBM SPSS predictive analytics functionality and components with diagram.	**20**	**CO5**
Q 11	Draw and describe the Core Banking Solution with various components that make the system complete and effective.	**20**	

	OR Discuss and differentiate with example : i) Real-time database Systems performance Evaluation and Web-Database Systems performance Evaluation ii) Data Warehouse and Big Data iii) Meta data and Reference data iv) Structured and Unstructured Data		**CO4**