Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Business Intelligence — **Semester: II**
Program: MBA BA — **Time : 03 hrs.**
Course Code: DSBA 7006 — **Max. Marks: 100**
Instructions:

SET 1
SECTION A
10Q x 2M=20Marks

S. No.	Mention **True / False or Fill** in the blanks against each question	**Marks**	**CO**
Q 1	BI includes multiple tools and techniques to transform raw data into meaningful and actionable information	**2**	**CO1**
Q 2	Business Intelligence in modern business cannot produce reports and analysis on-the-fly and share data with other users to make decisions and optimize business results	**2**	**CO1**
Q 3	BI includes quantitative analysis, measuring performance against business goals, gleaning customer insights, and sharing data to identify new opportunities	**2**	**CO1**
Q 4	BI Streamlines a controlled and managed process of data-driven decision making	**2**	**CO1**
Q 5	The _____ is not comparable to a table in a relational database	**2**	**CO1**
Q 6	_____ possesses consolidated historical and current data, which helps the organization to analyze its business	**2**	**CO1**
Q 7	_____ process is essential before the data is ingested into data warehouse	**2**	**CO1**
Q 8	_____ and _____ type of information processing	**2**	**CO1**
Q 9	_____ and _____ tables are required for data modelling	**2**	**CO1**
Q 10	Star Schema consists of a fact table with a single table for each dimension	**2**	**CO1**

SECTION B **4Q x 5M= 20 Marks**			
Q	**Attempt any four questions**	**Marks**	
Q 1	Define Business Intelligence.	**5**	**CO2**
Q 2	What are the challenges of implementing business intelligence	**5**	**CO2**
Q 3	What does data mining help us to do with data?	**5**	**CO2**
Q 4	What is slicing and dicing?	**5**	**CO2**
Q 5	Why data warehouse is required for BI.	**5**	**CO2**
SECTION-C **3Q x10M=30 Marks**			
Q	**Statement of question**		
Q 1	The organization requires to carry the customer profiling and segmentation, Which of the techniques of data mining, classification or clustering would be suitable and what would be the difference if both are techniques are used?	**10**	**CO2**
Q 2	How can Business Intelligence benefit the organization?	**10**	**CO2**
Q 3	You are given a task to create a multi-dimensional data model, explain the process in brief.	**10**	**CO2**
SECTION-D **2Q x15M= 30 Marks**			
Q	**Statement of question**		
Q1.	A bank wants to build a data warehouse for storing and analyzing data about all loans issued by them. Every loan has one or more borrowers, a starting date, a type (e.g., fixed rate or one of different types of variable rate), the branch of the bank where the loan was issued, the interest rate at the start of the loan, and the amount. For every loan the purpose of the loan is recorded; e.g., to buy a car, a house, a personal loan. When a borrower applies for the loan, different discounts on the interest rate may be awarded; e.g., fidelity discount, discount because the borrower also bought some additional insurances, VIP discount, etc. For one loan, multiple discounts may apply. The amount of discount is independent of the branch. Every discount that has been awarded needs to be stored. When the loan ends, this is stored as well, together with an indication if the	**15**	**CO3**

.	loan was Fully repaid or the borrower defaulted. For the borrowers, their date of birth, family status, monthly income, number of children and address is stored. The following questions are prototypical for the type of query analysts want to answer based on the data warehouse: • Give the average interest rate before discount at the start of the loan, per loan type and branch. • For all branches, give the minimum, maximum and average interest rate per loan type and purpose. • Give the number of loans per branch and per amount category. The amount category depends on predefined thresholds; amounts are divided into the following classes: very high, high, medium, low, and very low. • Give the percentage of defaulted loans per year and per city of the branch where the loan was issued. **Q. Make a dimensional star schema model for a data warehouse according to the above description**		
Q2	An airline organization is planning to have a BI system through which various analysis would be done. As a business analyst what would you suggest, a data warehouse or a DataMart ? Justify your answer accordingly.	**15**	**CO3**