Name:

**Enrolment No:** 



### UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, May 2021

**Course: Data Warehousing and Multidimensional Modelling** 

Program: B.Tech- CS-BAO Course Code: CSBA 3002 Semester: IV Time: 03 hrs. Max. Marks: 100

**Instructions: all questions are compulsory** 

### **SECTION A**

### **Each Questions carry 5 marks**

| S. No.      | Write short notes on the following                                 | CO  |  |  |  |
|-------------|--|-----|--|--|--|
| Q 1         | Identify the different types of Data.                              | CO1 |  |  |  |
| Q2          | Differentiate between Subject oriented & Object oriented concepts. | CO1 |  |  |  |
| Q3          | Catalog the different transformation processes in the ETL.         | CO2 |  |  |  |
| Q4          | Explain with diagram the concept of 3 Dimensional Data.            | CO3 |  |  |  |
| Q5          | Identify at least 4 difference between fact and dimension?         | CO2 |  |  |  |
| Q6          | Explain star schema.   | CO3 |  |  |  |
| CT CCT ON D |  |     |  |  |  |

#### **SECTION B**

### Each Ouestions carry 10 marks

|      | Each Questions carry to marks  |     |
|------|--|-----|
|      | All questions are compulsory   | CO  |
| Q7   | Differentiate between OLAP & OLTP                                    | CO3 |
| Q8   | Identify and explain the different architecture of Data Warehouse    | CO2 |
| Q9   | Explain in detail the 3 tire architecture and identify its drawbacks | CO4 |
| Q10  | Explain in detail HOLAP and identify its pros and cons               | CO4 |
| Q 11 | Differentiate between ROLAP & MOLAP                                  | CO3 |

### **SECTION-C**

# Question carry 20 marks

# Attempt only 1 Question between Q12 or Q13

| Any 1 question is to be attempted (Marks-[20])   | CO |
|--|----|
| You have been appointed as a technical consultant to help setup a Departmental Store in        |    |
| Dehradun. There are lots of parameters which needs to be identified and processed to make      |    |
| decisions in i)identification of Location, ii) identification of products, ii)) calculation of |    |

|      | profitability. Keeping in mind the above given scenario, please answer the following questions: |   |     |  |
|------|---|---|-----|--|
| Q 12 | i.<br>ii.   | Explain in detail the initialization of decision making process and identify a proper strategy in the above scenario.  What would be a good design of Data Warehouse under the above given facts? | CO5 |  |
| Q13  | i.<br>ii.   | Identify and design 4 Star Schema and 4 Snowflake schema for the above case.  What would be your OLTP data model consideration?   | CO5 |  |