* D I - 1 7 5 2 *

DI-1752

M. Sc. (IT) (Sem. IX) Examination

March / April - 2016

Data Warehousing

(Old & New Course)

Time : 3 Hours] [Total Marks : 70

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **M. Sc. (IT) (Sem. IX)**

Name of the Subject :

☛ **Data Warehousing** *(Old & New Course)*

☛Subject Code No. : **1 7 5 2** ☛Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Draw the Figure and give example wherever necessary.

Q1. Answer the Following with examples where ever applicable: (Attempt any nine) [18]

1. What is datamart?
2. Explain the term granularity.
3. Explain the term back flush.
4. Which factors make integration hard?
5. Explain roll-up and drill down in multidimensional data with an example.
6. What are the different types of interestingness data mining algorithms look for?
7. What is fact constellation?
8. What are sparse data?
9. What are conformed dimensions?
10. What is an out triggered table?

Q2. Answer the following: [16]

1. Discuss the life cycle of data warehouse development and delivery process. 8
2. Explain dimensional analysis. 4
3. Why is DW de- normalized? 4

OR

4. Explain different types of measures in fact table. 4

Q3. Do as follows: (Attempt any three) [18]

1. Differentiate Immediate data extraction and deferred data extraction
2. How split attribute is chosen in decision tree algorithm?
3. Explain iterative partition clustering algorithm.
4. Discuss different types of fact less fact table.

Q4. Case Studies: [18]

1. In a factory, the quality control department must classify the products into two grades: *G1* or *G2*. Each object has 5 attributes: the *size, colour, property1, property2 and property3*. You collect a dataset of instances (below): (8)

Size	Colour	Property1	Property2	Property3	Grade
Small	Black	100	100000	10	*G1*
Small	Black	300	700000	5	*G2*
Large	Grey	250	300000	1	*G1*
Large	Black	500	200000	6	*G1*
Large	Grey	100	600000	3	*G2*
Small	Black	300	700000	9	*G1*
Small	Black	200	100000	5	*?*

Apply proper transformations and normalizations and predict the grade of the new instance using 3- KNN.
Discuss advantages and disadvantages of KNN algorithm.

2. Make a snow flake schema with one-way aggregation for a railway reservation department. Write atleast six one way aggregates queries. (10)