Day:	Wednesday		Date:	02.00 PM TO 05.00 PM
Time:	29/05/2019	**S-2019-2347**	Max Marks: 100	

N.B:

1) Attempt any **FOUR** questions from Section- **I** & any **TWO** questions from Section-**II**.

2) Each questions from Section-**I** carries **15** marks & each question from Section-**II** carries **20** marks.

SECTION-I

Q.1 What is Data Warehousing? Explain operational database system Vs Data Warehouse. **(15)**

Q.2 What is data cube? Explain schemas for multidimensional database. **(15)**

Q.3 Explain the concept of ETL (Extract, Transform & Load) in the data warehousing using suitable example. **(15)**

Q.4 Explain Data- mining applications in CRM. **(15)**

Q.5 Explain classification and prediction issues in Data- mining. **(15)**

Q.6 Write short note on (any **THREE**) Of the following: **(15)**

   a) OLTP Vs OLAP
   b) Starnet Query Model
   c) Data Reduction
   d) Missing Values- in Data Cleaning

SECTION-II

Q.7 Consider the market basket data represented in binary format in the following table. **(20)**

Trans-id	Bread	Milk	Butter	Complain	Jelly
1	0	1	1	1	0
2	0	1	1	0	0
3	1	1	1	0	0
4	0	1	0	0	1
5	1	0	0	0	1

Generate association rules using Apriori association rules generations algorithm.

Q.8 A hospital having various departments. The hospital is working since last 20 years. The large amount of medical data is available. How will you design the data warehouse? Explain the architecture for data warehouse. How does it will provide better services? **(20)**

Q.9 a) Explain the issues during data integration. **(10)**
   b) Explain K- means, K- medoids partitioning method used for clustering. **(10)**

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