Roll No. | | | | | | | | | | | |

Total No. of Pages : 02

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MCA (2015 & Onward) (Sem.–6)

# DATA WAREHOUSING & MINING

Subject Code : MCA-601

M.Code : 74755

Time : 3 Hrs. Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

## SECTION-A

1. Explain the different types of data warehouse models used in three-tier Data Warehouse Architecture.

2. What is spatial data warehouse? Explain the architecture for spatial systems.

## SECTION-B

3. What is a temporal database? Explain fact relationships and measures for temporal data warehouse.

4. Explain the following :

   a. Temporal hierarchies.

   b. Temporal data types.

## SECTION-C

5. What is back propagation? Write an algorithm for classification by back propagation.

6. How classification is performed using genetic algorithms and k-nearest neighbor? Explain.

## SECTION-D

7. How clustering can be performed by partitioning methods? Explain algorithms for k-means and k-mediods partitioning methods.

8. How object dissimilarity can be computed for objects described by interval-scaled variables and binary variables? Explain.

## SECTION-E

**9. Answer briefly :**

a. Define agglomerative hierarchical clustering.

b. What is linear regression?

c. Define Data warehouse models.

d. Define Spatial Objects.

e. Define Nominal Variables.

f. Define Temporal Granularity.

g. Discuss temporal support for levels.

h. Discuss DBSCAN.

i. What are genetic algorithms?

j. What is bayes theorem?



**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**