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Total No. of Questions : 07

BCA (2013 & Onwards) (Sem.–5)

DATA WAREHOUSING AND MINING

Subject Code : BSBC-501

M.Code : 70628

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION-A

Q1. Answer briefly :

a) What are operational and informational data stores?

b) What is OLAP data warehouse?

c) Write about the importance of Artificial Intelligence.

d) What are data cubes?

e) What is data summarization?

f) How does decision tree work?

g) Write about market based analysis.

h) What is the accuracy of classifier?

i) What is cross validation?

j) Why do we use data visualization?

SECTION-B

Q2 How much does a data warehouse cost? Write their applications and uses.

Q3 Discuss the steps of building data warehouse by considering various technical aspects.

Q4 What is multidimensional data model? Discuss the schemas for multidimensional data.

Q5 What is association rule mining? Explain Apriori algorithm in data mining.

Q6 Define clustering? Why clustering is important in Data Mining? Write its uses.

Q7 What are different types of Data Mining Techniques? Explain any one in detail?.

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.

Total No. of Questions: 07

BCA (2011 & Onward) (Sem. – 5)

DATA WAREHOUSING AND MINING

M Code: 70628

Subject Code: BSBC-501

Paper ID: [B1154]

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION A

1. Briefly answer the following:

   a) Differentiate between operational and informational data stores.

   b) What is multidimensional data? Give two examples.

   c) What is OLAM?

   d) Define Data Mining.

   e) Briefly discuss the Snowflake schema.

   f) Discuss Discovery driven cube.

   g) What is a Decision Tree?

   h) How is the accuracy of a classifier measured?

   i) What are the different types of data used in cluster analysis?

   j) What are the parameters for selecting and using the right data mining technique?

SECTION B

2. Define Data Warehousing. What is the need for data warehousing? Discuss the structure of a data warehouse.
3. What do you mean by data pre-processing? Explain the various stages in the process of data pre-processing.
4. What is OLAP? Discuss the architecture of OLAP in detail.
5. Explain Association Rule Mining. What are the various algorithms for generating association rules? Discuss with examples.
6. Discuss Bootstrapping, Boosting and Bagging with examples.
7. What is Clustering? Discuss the various clustering algorithms.

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Total No. of Questions: 07 **Total No. of Pages: 02**

BCA (Sem. 5)
DATA WAREHOUSING AND MINING
Subject Code: BSBC-501
Paper ID: B1154

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **Section A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **Section B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION A

1. Write briefly:

a) Advantage of Data Warehouse.
b) Why Data Transformation is done?
c) What is Indexing & Querying in OLAP?
d) Differentiate OLAP & OLTP.
e) Explain Constraint based Association Rule Mining.
f) What are various attribute selection measures?
g) Why Cross-Validation is done?
h) Explain the concept of Bagging.
i) What is classification?
j) Importance of Data Visualization.

SECTION B

2. What are the various designs Consideration of a Data Warehouse? Why data summarization and Data cleaning is done?

3. Explain Star & Snowflake database schema in detail. Also construct a fact table of star schema.

4. Elaborate the concept of discovery driven exploration of Data Warehouse with the help of an example.

5. What is Data Mining and why it is important? Explain Market Basket analysis with the help of an example.

6. Discuss various prediction techniques available. How these techniques arc helpful in real life?

7. Why clustering is done? Compare and contrast various clustering algorithms.

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BCA (2011 & Onward) (Sem.–5)

DATA WAREHOUSING AND MINING

Subject Code : BSBC-501

Paper ID : [B1154]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION-A

1. Write briefly :

a) List some applications of Data Mining.

b) What is MODEL in Data Mining world?

c) Explain clustering algorithm.

d) What are the storage models of OLAP?

e) What is Data Purging?

f) What is Apriori Algorithm?

g) What is Bootstrap?

h) Briefly state difference between Data Warehouse and Data Mart.

i) What is Star Schema?

j) What is OLAM?

SECTION-B

2. Discuss various applications of data warehousing and data mining.

3. What is OLAP and OLTP? Differentiate OLAP and OLTP.

4. Explain the Design/Technical/Implementation considerations to build a Data Warehouse.

5. Explain Association rule mining in detail.

6. What are DM Techniques? How we can select and use right DM Technique?

7. Explain the following :

   a) Data Visualization

   b) Cube Computation

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BCA (2011 & Onward) (Sem.–5)

DATA WAREHOUSING AND MINING

Subject Code : BSBC-501

Paper ID : [B1154]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION - A

1 Write briefly :

a) What is a Data Mart? How is a data mart different from a data warehouse?

b) What is data cleaning? Why is it important?

c) How AI is used in data warehousing?

d) What are the advantages of data mining?

e) What are the efficient methods of cube computation? Discuss any one in brief.

f) What is Attribute-oriented induction?

g) Distinguish between classification and clustering.

h) What is Prediction? Discuss any prediction technique in brief.

i) What is OLAM? How is it different from OLAP?

j) Define Data Visualization.

SECTION-B

2. What is a Data Warehouse? What are the characteristics of a data warehouse? What is the need for a data warehouse?

3. Define and compare OLAP and OLTP. Discuss the various OLAP operations with examples.

4. Explain the various schemas for multidimensional data model.

5. Elaborate the 3-tier data warehouse architecture.

6. Describe the different classifications of Association rule mining. How is association rules mined from large databases?

7. What are the major requirements of clustering analysis? Briefly discuss any two hierarchical clustering methods with suitable examples.

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DATA WAREHOUSING AND MINING

Subject Code : BSBC-501

Paper ID : [B1154]

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INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION–A

1. Write briefly :

a) What is OLTP?

b) What is Data Mining?

c) What is clustering?

d) Define Data cube.

e) What is the use of multi dimensional view?

f) Discuss star schema.

g) What is association rule?

h) Define warehouse environment.

i) What is drill down analysis?

j) Define bagging.

SECTION-B

2) What is OLAP? What are the various operations performed on OLAP.

3) What is Data Warehouse? Discuss its architecture with the help of diagram.

4) Explain the following with proper examples :

   a) Hyper cubes

   b) ROLAP and MOLAP

5) Differentiate star and snowflake schemas of warehouse.

6) Write a detailed note on fact constellation, its advantages and related concepts.

7) Give application of data mining in the following area:

   a) Retail Industry

   b) Tele-Communication Industry.

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BCA (2011 & Onward) (Sem.–5)

DATA WAREHOUSING AND MINING

Subject Code : BSBC-501

Paper ID : [B1154]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students has to attempt any FOUR questions.**

SECTION-A

1. Write briefly :

A) List Characteristics of Data Warehouse.

B) Why data summarization and Data cleaning is done?

C) What is Indexing & Querying in OLAP?

D) What is Attribute- Oriented Induction?

E) Explain Association Rule Mining.

F) What are various attribute selection measures?

G) Why Cross-Validation is done?

H) Explain the concept of Boosting.

I) What is Clustering?

J) Importance of Data Visualization.

SECTION-B

2. What is Data Warehousing and why we need it? Also explain the architecture of Data Warehouse in detail.

3. Explain Star & Snowflake database schema in detail. Also construct a fact table of star schema.

4. Elaborate the concept of discovery driven exploration of Data Warehouse with the help of an example.

5. What is Data Mining and why it is important? Explain Market Basket analysis with the help of an example.

6. Why classification is done? Explain classification by decision trees with the help of an example.

7. Discuss various prediction techniques available. How these techniques are helpful in real life?

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BCA (2011 & onward) (Sem.–5)

DATA WAREHOUSING AND MINING

Subject Code : BSBC-501

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INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION - A

1) Write briefly :

a) Differentiate between Data Mining & Data Warehousing

b) What are OLAP & OLTP?

c) What are different stages of Data mining?

d) What is Data Mart?

e) Explain association algorithm in data mining.

f) What is decision tree algorithm?

g) Define classification.

h) What is Data Visualization?

i) What is indexing?

j) What is Artificial Intelligence?

SECTION - B

2) What is Data Warehousing? Explain Data warehouse characteristics.

3) Explain in detail the three tier architecture.

4) What do you mean by cleaning of data? Explain the important types of data cleaning.

5) Write Short notes on following :

   (a) Market Basket Analysis

   (b) Constraint Based Association mining

6) What is clustering? Explain classification of various clustering algorithms.

7) Discuss various schemas for multidimensional data.