sem- IV (choice based) / Data Mining & Business Intelligence / May 2018

Q.P.Code: 40671

(3 Hours) 80 Marks

N.B.: (1) Q.1 is compulsory.
(2) Attempt any three out of remaining five.
(3) Figures to the right indicate full marks.

1 A) Discuss issues to consider during data integration. [10]

B) Describe in detail Data warehouse architecture and ETL process. [10]

2 A) What is **Market Basket Analysis?** Find out strong association rule form the given example using apriori algorithm with the support of 50% and confidence of 70% [10]

Trans_Id	Item
1.	Laptop, Mouse, Headphones, Pendrive, Speakers
2.	Laptop, Headphones
3.	Laptop, Mouse, Pendrive
4.	Mouse, Speakers
5.	Laptop, Pendrive

B) Explain text mining and discus in brief the information retrieval methods. [10]

3 A) What are the characteristics and benefits of data marts? [10]

B) Explain data pre-processing in detail. Apply Naïve Bayes algorithm and predict that if a fruit has the following properties then which type of fruit it is. [10]
Fruit{Yellow, Sweet, Long}

Fruit	Yellow	Sweet	Long	Total
Mango	350	450	0	650
Banana	400	300	350	400
Others	50	100	50	150
Total	800	850	400	1200

4 A) What is classification? Explain in detail Associative Classification method. [10]

B) Write the algorithm for K-Means Clustering. Generate the clusters using K-Means Clustering (K = 2) [10]

Object	Attribute1 (X): weight index	Attribute 2 (Y): pH
Medicine A	1	1
Medicine B	2	1
Medicine C	4	3
Medicine D	5	4

5A) Illustrate, with an example, the following OLAP operations: roll-up, drill-down, slice, dice, and pivot. [10]

B) What is regression? How can linear regression be used for prediction. [10]

6 A) Write Notes on any two: [10]

a) Web mining.
b) Star and snow flake schema
c) KDD process.

B) Explain the prediction methods and models for business intelligence. [10]

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MCA Sem-IV / Choice Base / AWT / May 2018

Q.P. CODE: 36378

(Time: 3 Hours) **Total Marks: - 80**

N.B. (1) Question No. **1** is **compulsory.**
(2) Attempt any **three** from the remaining questions.
(3) Illustrate answers with neat sketches wherever required.
(4) Answers to questions should be **grouped** and written **together.**

Q.1	(a)	Explain .Net framework in detail.	10
	(b)	What is ADO.NET? Explain various steps involved to connect a database using C# with an example.	10
Q.2	(a)	What is Exception Handling? Explain various Exception Handling Keywords in C#.	10
	(b)	What is WCF? Explain WCF architecture in detail.	10
Q. 3	(a)	Explain various ASP.NET coding modules in detail.	10
	(b)	What is the use of Generics in C#? Explain with suitable example.	10
Q. 4	(a)	What is Constructor? Explain various types of Constructors in C# with suitable example.	10
	(b)	Explain in detail Postback and Cross page posting in ASP.Net.	10
Q. 5	(a)	List the different classes which are used in C-Sharp for file handling? Explain any two classes with the help of example.	10
	(b)	What is AJAX? Explain Timer Control and UpdatePanel Control with suitable example.	10
Q. 6	(a)	Create ASP.NET application to demonstrate various validation controls.	10
	(b)	What is Web Service? Explain UDDI, SOAP, and WSDL with respect to web services.	10

MCA / Sem-IV [CHOICE BASED] / Computer Graphics / May-2018

Q. P. Code : 34877

[Time: 3 Hours] **[Marks:80]**

Please check whether you have got the right question paper.

N.B: (1) Question No. 1 is **Compulsory.**
(2) Attempt any ***three from 2 to 6*** from remaining **five** Questions.

1. (a) Write the types of projection and differentiate between parallel and perspective projection. **10**
   (b) Write the Bresenham's Line Drawing algorithm and Rasterize the line between the endpoints (4, 7) and (9, 11). **10**

2. (a) What do you mean by viewing pipeline? Explain window to viewport transformation in brief. **10**
   (b) Define the different types of 2D transformations with matrix representation. **10**

3. (a) What are fractals? Write the types of fractals. **10**
   (b) Apply the scaling transformation on triangle A(10,10), B(17,8) and C(13,15) by keeping C fixed. **10**

4. (a) Write the meaning and matrix representation of 3D transformations - translation, rotation, scaling, reflection and shear. **10**
   (b) Explain the reflection about arbitrary axis in 3D with matrices. **10**

5. (a) Write the fundamental steps in Digital Image processing in short. **10**
   (b) Apply the following transformations on the following 3 BPP image- **10**
   a) Image negative
   b) Gray-level slicing with background **when rl=3 and r2 6.**
   c) Thresholding with **Threshold value=4.**

2	1	0	7	5
4	2	3	1	2
7	6	2	1	6
2	4	5	6	7
2	3	4	5	1

20

6. Write a short note on **(ANY FOUR)**
   (i) Cubic Bezier Curve
   (ii) Non-Zero winding Number Rule
   (iii) Sampling & Quantization
   (iv) Graphics System
   (v) Homogeneous Coordinates

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MCA / Sem. IV / Choice Base / Enterpren. Mgmt. / May 18

QP CODE: 35171

Total Marks: 100

(3 Hours)

N.B. : 1) Question No.1 is **compulsory.**
2) Attempt any **three** from the remaining **five** questions.
3) Figures to the right indicate full marks.

Q1. (a) What is Entrepreneur? What are the various ways of classifying entrepreneurs? [10]
(b) What is corporate social responsibility? Explain dimension of CSR. [10]

Q2. (a) Explain Government policies of small scale Industries. [10]
(b) Defined woman Entrepreneurship? What are challenges faced by woman Entrepreneurship? [10]

Q3. (a) What is Business plan? Explain the types of Business Plan. [10]
(b) Explain different strategies to grow a young entrepreneurial company. [10]

Q4. (a) What is pre selection process? Which are different sources of business idea? [10]
(b) Which are the central and state level institution supporting small scale enterprises? [10]

Q5. (a) How to overcome pressure of financial and Human Resources during growth? [10]
(b) Explain Strategies for the Development of Women Entrepreneurship. [10]
[10]

Q6. (a) Explain the process of setting up small Business enterprise. [10]
(b) What are the reasons for an entrepreneur to exit from his business? Explain in detail. [10]

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MCA/Sem. IV/choice base/BIM/May-18

Q.P code :33795

(3 Hours) [total Marks: 80]

N. B.: (1) Question number 1 is **compulsory**
(2) Attempt any **three** out of remaining **five** questions
(3) Assume any **necessary data** but justify the same

1. A] Define E – Business. Explain the roles and challenges of E – Business in today's competitive business environment? 10
   B] What is E – Business Strategy? How does E – Business Strategy differ from Traditional Business Strategy? 10

2. A] Describe Business Model and also explain the 8 key elements of a business model? 10
   B] Define Electronic commerce and describe how it has changed consumer retailing and business-to-business transaction? 10

3. A] What are the management challenges and opportunities while running a digital firm? 10
   B] Explain the positive and negative impact of E – market for a digital organization 10

4. A] What are the major features of a business that are important for understanding the role of information system? 10
   B] What are the barriers affecting the growth of E – Business in electronic market? 10

5. A] Explain the basic technological infrastructure of E – Business. 10
   B] How do information systems support the major business functions: sales and marketing, manufacturing and production, finance and accounting, and human resources? 10

6. Write short notes on: 20
   1) Strategic Positioning
   2) Networked Business strategy
   3) Web Hosting services
   4) Enterprise Resource Planning

MCA / sem. IV / choice base / ERP / May - 18

Q.P.Code: 40229

(3 Hours) (Marks 80)

Note:
1) Question No. 1 is compulsory.
2) Attempt any three questions from Q.2 to Q.7
3) Figures to the right indicate marks.
4) Additional information can be considered but justify the same.
5) Write assumed data for case study.

Q.1 Write a Short Note on Following(any 4) 20

1. OLAP
2. Bill Of Material (BOM)
3. Customer Relationship Management
4. Supply Chain Model
5. Datamining
6. Data warehouse

Q.2 a) Explain three tire architecture of ERP implementation with an example 10

b) Explain ERP lifecycle phases in brief. 10

Q.3 a) Explain various subsystems of finance module with an example. 10

b) What is lead time how it is reduced using ERP 10

Q.4 a) What are the intangible benefits of an ERP implementation 10

b) What is gap analysis and explain the go live approach 10

Q.5 a) What is business modeling explain with an example 10

b) What is Computer Aided Design and Computer Aided Manufacturing 10

Q.6 a) What is Product data management (PDM) and how does it improves the competitiveness of the organization. 10

10

b) **Write differences between**

1. CRM & SCM
2. MIS & DSS
3. MRP & MRPII

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CA | sem-IV (choice based) / AI & soft computing / M-18.

Q.P. Code: 34497

[Total Marks: 80]

(3 Hours)

N.B. : 1) Question No.1 is **compulsory.**
2) Attempt any **three** from the remaining questions.
3) Use of calculator is allowed.

1. Attempt the following (20)

a) Differentiate between Hard Computing & Soft Computing.

b) Describe Agent and its properties with suitable diagram.

c) Using Zadeh's notation, determine the following for the given fuzzy sets:

$$A = \left\{\frac{0.3}{x1} + \frac{0.4}{x2} + \frac{0.5}{x3} + \frac{0.7}{x4} + \frac{1}{x5}\right\} \quad B = \left\{\frac{0.7}{x1} + \frac{0.8}{x2} + \frac{0.7}{x3} + \frac{1}{x4} + \frac{0.6}{x5}\right\}$$

1. $A \cap B$ 2. $A \cup B$ 3. $\overline{A \cup B}$ 4. $\overline{A} \cup \overline{B}$ 5. $A \cap \overline{A}$

d) What is maxnet? Explain it with neat diagram

2. (a) Define state space search for the following problem – (10)
"We are given two water jugs having no measuring marks on these. The capacity of jugs is 3 liters and 5 liters. It is required to fill the bigger jug with exactly 4 liters of water. The water can be filled in a jug from a tap".

(b) What is Fuzzy Inference system (FIS)? Explain Mamdani FIS in brief along with its advantages. (10)

3. (a) Explain the different types of knowledge representations schemes with the help of suitable example. (10)

(b) What is Genetic Algorithm? Explain crossover and mutation operation in GA. (10)

4. (a) Describe and define: (10)
1. Tower of Hanoi problem
2. Breadth-First Search Technique

(b) For the following fuzzy sets (10)

$$P = \left\{\frac{0.1}{2} + \frac{0.3}{4} + \frac{0.7}{6} + \frac{0.4}{8} + \frac{0.2}{10}\right\}$$

$$Q = \left\{\frac{0.1}{0.1} + \frac{0.3}{0.2} + \frac{0.3}{0.3} + \frac{0.4}{0.4} + \frac{0.5}{0.5} + \frac{0.2}{0.6}\right\}$$

$$T = \left\{\frac{0.1}{0} + \frac{0.7}{0.5} + \frac{0.3}{1}\right\}$$

The following operations performed over the fuzzy sets

$$R = P \times Q$$
$$S = Q \times T$$
$$M = R \circ S$$
$$M = R \bullet S$$

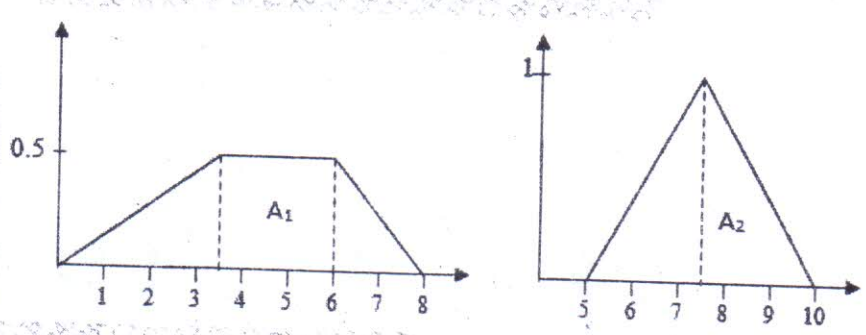
5. (a) Explain perceptron training algorithm. (10)
Implement AND function using Perceptron network for bipolar inputs (x_1, x_2) and bipolar targets (t). (Learning rate α=1 , threshold θ= 0)

x_1	x_2	t
1	1	1
1	-1	-1
-1	1	-1
-1	-1	-1

(b) Explain any three Selection methods in Genetic Algorithm. (10)

6. Attempt the following (20)

a) For given A_1, A_2 illustrate centroid defuzzification method:



b) What is membership function? Explain intuition method of membership value assignment in brief.

c) Compare Mamdani and Takagi-Sugeno Fuzzy Inference System.

d) Differentiate between supervised learning network and unsupervised learning network.

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A / Sem-IV / Choice base / Ethics & CSR / May -18

Q.P. Code : 37571

[Total Marks: 80]

(3 Hours)

N.B.: 1) Question No.1 is **compulsory.**
2) Attempt any **three** from the remaining **five** questions.

1. (a) What is the global perspective of CSR? Explain in detail. (10)
   (b) Briefly Explain steps in ethical audit process. (10)

2. (a) List and explain ethical issues in Media. (10)
   (b) What is CSR? How CSR makes corporate governance more meaningful? (10)

3. (a) Explain steps in development of Ethical Codes (10)
   (b) Analyze the role of government or political structure in promoting CSR. (10)

4. (a) Discuss and compare any two Moral Development theories. (10)
   (b) List and explain various classifications of Ethics (10)

5. (a) Major ethical issues are involved when multinationals operate in other countries". Discuss and give relevant examples. (10)
   (b) List & Explain various Ethical Principles (10)

6. Write Short Notes on ***any four*** :- (20)
   a) Types of codes of Ethics
   b) History of CSR in India
   c) Euthanasia
   d) IPR
   e) Ethical living

MCA SEM IV (Choice Based) R-2018 May-June 2018.
Elective II Digital forensics.

Q.P. Code: 33310

Duration: 3 Hours **Marks: 80**

N.B. (1) Question No. 1 is compulsory.
(2) Attempt any three from the remaining five questions.
(3) Answers to questions should be grouped and written together.

Q.1	(a)	What is Cybercrime? Explain different types of Cybercrime	[10]
	(b)	How a hacker can use different various methods for cracking password	[10]
Q.2	(a)	What is Steganography? Explain different types of Steganography	[10]
	(b)	Explain role and responsibilities of people involved in data collection techniques	[10]
Q.3	(a)	Explain data extraction techniques in Android forensic	[10]
	(b)	What is intrusion detection system (IDS)? Explain different types of intrusion detection system	[10]
Q.4	(a)	Explain three dimensions of cloud forensic	[10]
	(b)	What do you mean by forensic duplication? Explain necessity of forensic duplication and also explain the rules of forensic duplication	[10]
Q.5	(a)	What is mobile forensic? Explain different data can be used as evidence in mobile forensic	[10]
	(b)	What is cloud forensic ?Explain challenges of cloud forensic	[10]
Q.6		Write a short notes on any four	[20]
	(a)	Types of digital evidence	
	(b)	Securing Email Account	
	(c)	Mirror Image and Restored Image	
	(d)	Recovering deleted files on windows system	
	(e)	IDIP (Integrated Digital Investigation Process) Model	