E-SEM-I (CBSGS) – INFT – Adv. Data Mining with BI.

QP Code : 30370

(Time: 3 Hrs) **Marks: 80**

N.B. : 1. Question no. 1 is **compulsory**.
2. Solve any **Three** questions out of remaining **Five** questions.

Qu-1	a)	Define accuracy? Explain how classification accuracy can be improved?	5
	b)	Write short note on trends in Data Mining	5
	c)	Explain in short explanatory versus predictive modeling.	5
	d)	What is data mining? How is data mining related to BI?	5
Qu-2	a)	Explain BI architecture. Illustrate characteristics and benefits of BI.	10
	b)	Suppose that a base cuboid has three dimensions A,B,C, with the following number of cells: $\|A\| = 1,000,000$, $\|B\| = 100$, and $\|C\| = 1000$. Suppose that each dimension is evenly partitioned into 10 portions for *chunking*. (a) Assuming each dimension has only one level, draw the complete lattice of the cube. (b) If each cube cell stores one measure with 4 bytes, what is the total size of the computed cube if the cube is *dense*? (c) State the order for computing the chunks in the cube that requires the least amount of space, and compute the total amount of main memory space required for computing the 2-D planes.	10
Qu-3	a)	List and briefly discuss some of the text mining applications in marketing.	10
	b)	Explain advanced pattern mining with multilevel and multidimensional space.	10
Qu-4	a)	What are Bayesian Belief Networks? Explain with an example.	10
	b)	Compare and contrast: i) BPM vs BI ii) Dashboard and Scorecard.	10
Qu-5	a)	Explain Mining Frequent Itemsets using vertical data formats with suitable example.	10
	b)	How the density of an object can be measured? How can we find dense regions in density-based clustering? Explain with example?	10
Qu-6		Attempt the following	
	a)	Explain in short Mining Graphs and Networks.	5
	b)	Explain in short On-Demand BI.	5
	c)	Compare and contrast: Lazy Learner and Eager Learners.	5
	d)	Explain in short Clustering with constraints.	5

M.E. Sem I (Regs) Data Storage Management + Retrieval

Q.P. Code : **30373**

(3 Hours) [Total Marks : 80

N.B. : (1) Question **No.1** is **compulsory**.
(2) **Attempt** any **three** questions out of **remaining** questions.
(3) Assume **suitable data** if **required**.
(4) **Figures** to the **right** indicate the **marks**.

1. (a) An application has 1,000 heavy users at a peak of 2 IOPS each and 2,000 typical users at a peak of 1 IOPS each, with a read / write ratio of 2:1. It is estimated that the application also experiences an overhead of 20 percent for other workloads. Calculate the IOPS requirement for RAID1, RAID3, RAID5 & RAID6. Also calculate the number of drives required to support the application in different RAID environment if 10K rpm drives with a rating of 130 IOPS per drive were used. 10
(b) Explain the different forms of storage virtualization in detail. 10

2. (a) Explain the Virtual Interface Architecture that allows application & VI network cards to exchange data, bypassing the operating system. 10
(b) Explain the different RAID levels in detail with neat diagrams. 10

3. (a) Justify the objectives of Information retrieval system. Give its function overview along with comparison of atleast two different Information systems. 10
(b) Explain the spatial representation on of a document term matrix in vector model. 10

4. (a) Address the specific Fabric login (FLOGI) with neat diagram along with comparison of their logins. 10
(b) Explain the factors affecting NAS performance & availability in detail. 10

5. (a) Explain the BC planning cycle in different stages. 10
(b) Give comparison between Fibre channel, iSCSI & NAS. 20

6. Write short note :
(a) Infini Band
(b) NFS & Samba
(c) Zoning
(d) SCSI-3

ME/INFT / NSM

QP Code : 29896

(3 Hours) [Total Marks: 80]

N.B: (1) Question No. 1 is Compulsory

(2)Solve any three questions out of the remaining five questions.

Q1. A company has its central office in Dadar.It has three sub- offices in Andheri, Vashi and Chembur. Total number of nodes required at Dadar is 400 while at the sub-offices 72 nodes each are required. 20

Design the office structure with classless addressing scheme with any suitable starting address.

Q2. Discuss the business and technical challenges of an organization which a network designer must understand. Discuss also the time and delay considerations. 20

Q3.a.What are the different steps of top-down network design? List typical technical goals and business goals. 10

b.Explain the relevance of queuing theory in Network design. 10

Explain M/M/1 queuing model.

Q4.a.Discuss the common network problems and various challenges faced by an IT manager to manage the network of an enterprise. 10

b.Discuss the two –tier and three- tier organization model of a network management system. 10

Q5.a. Explain SNMP community profile and SNMP access policy. 10

b.Compare SNMP v1& v2 network management architecture. 10

Q6. Write short notes on (ANY TWO):- 20

(a) ASN.1 notation.
(b) TMN Functional Architecture.
(c) RMON
(d) Network management standards.

ME- Sem-I-(CBSGS)-INFT - Usability Engg. -Nov-15

Q.P. Code : 30384

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

N.B: (1) Q.1 is compulsory.
(2) Attempt any three from remaining questions.
(3) Assume necessary data.

1. (a) Explain different interaction paradigms. Give example, where each paradigm is suitable. 10
   (b) What is Interaction Desig ? Explain its components. 10

2. (a) Explain Agent based interface. Give one application where this type of interface is useful. 10
   (b) What is Computer supported co-operative work. Which type of application this paradigm is useful. 10

3. (a) Using interaction design process design "Automatic Toll Collection System". 10
   (b) Explain conceptual design methods. 10

4. (a) What is Metaphor ? Give examples of different metaphors which can be used in interaction design. 10
   (b) Discuss on different parameters you will consider while designing GUI for kids in the age group of 2 to 5 years. 10

5. (a) What are the core components of the conceptual model ? 10
   (b) What are the goals of HCI ? 10

6. (a) Explain Paradigm, Theory, Model and Framework. 10
   (b) What are different kinds of cognition ? Explain different types of provesses which describe Cognition. 10

M.E. Sem I IT E-Business Techniques

Q.P. Code : 30394

(3 Hours) **[Total Marks : 80**

N.B.: (1) Question No. 1 is compulsory
(2) Write any three questions out of remaining.
(3) Assume suitable data if required.

1	(a)	Discuss revenue models for web portals and virtual communities	5
	(b)	Write short note on "e-business software".	5
	(c)	Explain the role of Internet service providers and telecommunication firms in e-business.	5
	(d)	How is a PERT diagram used in the implementation of the e-business plan?	5
2	(a)	What is cookie? Explain security and privacy issues with cookies.	10
	(b)	What is value chain? Describe primary activities in the value chain.	10
3	(a)	Explain various online payment systems.	10
	(b)	List and explain the primary methods used for successful e-business research.	10
4	(a)	What are the five forces that influence firm's competitive thinking?	10
	(b)	Explain various online payment systems. Discuss role of Automated Clearing House in payment mechanism.	10
5	(a)	Describe how economic factors affect strategic planning.	10
	(b)	Write short note on Digital Property and Distribution Rights.	10
6	(a)	Explain web services and how it impacts e-business.	10
	(b)	Compare various web hosting techniques in detail.	10