ST JOSEPH ENGINEERING COLLEGE, MANGALURU

An Autonomous Institution

Fifth Semester B.E. Degree (Autonomous) Examinations

USN: | | | | | | | | | | |

22AIM564/22CDS564

Duration: 3 Hrs **Maximum Marks: 100**

Business Intelligence

Note:
1. Part-A is mandatory.
2. Answer any five full questions from Part-B choosing at least one from each module.
3. Missing data may be suitably assumed.

PART-A

Q.No.	Question				BL	CO	PO	Marks
1	The prime objective of Business Intelligence is to				L2	1	1	1
	a)	Support information gathering	b)	Support data collection and analysis				
	c)	Support decision making	d)	Support decision-making and complex problem solving.				
2	Which of the following is a good characteristic of a DSS?				L2	1	1	1
	a)	It has an increment model	b)	Automates decision making process				
	c)	Responds quickly to decision makers to help in decision making	d)	None of these				
3	___ DSS supports companies to store and analyze internal and external data.				L2	2	1	1
	a)	Model-driven	b)	Data Driven DSS				
	c)	Communication-driven	d)	All of these				
4	A DSS gathers and analyzes data, produce it to create comprehensive information ___				L2	2	1	1
	a)	Documents	b)	Sheets				
	c)	Papers	d)	Reports				
5	Identify among the following for which system of data warehousing is mostly used				L2	3	1	1
	a)	Data mining & data storage	b)	Data cleaning & data storage				
	c)	Data integration & data storage	d)	Data analysis & reporting				

Q.No.	Question				BL	CO	PO	Marks
6	Choose the incorrect property of the data warehouse				L2	3	1	1
	a)	Subject oriented	b)	Volatile				
	c)	Time variant	d)	Collection from heterogeneous sources				
7	Select the correct flow in the process of data mining.				L2	4	1	1
	a)	Infrastructure, exploration, analysis, interpretation, and exploitation	b)	Exploration, Infrastructure, analysis, interpretation, and exploitation				
	c)	Exploration, Infrastructure, interpretation, analysis, and exploitation	d)	Exploration, Infrastructure, analysis, exploitation, and analysis				
8	Data mining is				L2	4	1	1
	a)	Deleting unnecessary data	b)	Storing data securely				
	c)	Extracting useful patterns or information from large datasets	d)	Sorting data alphabetically				
9	An expert system is divided into ___ subsystems				L1	5	1	1
	a)	One	b)	Two				
	c)	Three	d)	Four				
10	The expert systems are capable of				L2	5	1	1
	a)	Decision making	b)	Interpreting input				
	c)	Deriving a solution	d)	All of these				
11	Differentiate between normative and descriptive models.				L2	1	3	2
12	Write the key factors for evaluation of a choice.				L2	2	1	2
13	Differentiate between star and snowflake schema.				L2	3	3	2
14	Enumerate the sequence of steps in data preprocessing.				L2	4	1	2
15	Discuss the significance of certainty/uncertainty and risk in modelling and decision making.				L2	5	3	2
	PART-B							
	Module-1							
1	a)	With a neat diagram, justify the significance of a model used to support changing business environment.			L3	1	1	4
	b)	Analyze the various roles and their significance in the management process by a manager in the process of decision making.			L3	1	1	8
	c)	With a neat diagram, explain the implications of business environmental factors with respect to the changing business environment.			L2	1	3	4
	OR							

Q.No.		Question	BL	CO	PO	Marks
2	a)	Differentiate between DSS and Business Intelligence.	L3	1	1	4
	b)	Discuss the effects of information systems support in the decision making process.	L3	1	1	8
	c)	What is Business Intelligence? With a neat diagram, describe BI architecture.	L2	1	3	4
		Module-2				
3	a)	Explain the benefits of using models.	L2	2	1	4
	b)	With a neat diagram, justify the significance of different phases of Simon's decision making process.	L3	2	3	8
	c)	Discuss the significance of any two types of DSS categories.	L2	2	1	4
		OR				
4	a)	Discuss the need of data management and model management subsystems in DSS	L2	2	1	4
	b)	With a neat diagram, discuss the role of key characteristics and capabilities of Decision Support Systems.	L3	2	3	8
	c)	Describe the Institutional & Adhoc DSS and Custom made Systems Vs Ready-made systems.	L2	2	1	4
		Module-3				
5	a)	With a neat diagram, show the working of various components of a data warehouse framework.	L2	3	3	8
	b)	What is the significance of data integration? With a neat diagram, illustrate the Extract, Transform and Load (ETL) process by mentioning the criteria for selecting ETL tool and the issues affecting its purchase.	L3	3	3	8
		OR				
6	a)	With neat diagrams, illustrate the working of various types of data warehouse architectures. Describe the issues to be considered while selecting the type of architecture. .	L2	3	3	8
	b)	Discuss the most distinguishing features of Key Performance indicators.	L2	3	2	8
		Module-4				
7	a)	With a neat diagram, discuss the major characteristics and objectives of data mining	L3	4	1	8
	b)	With a neat diagram, explain the working of CRISP-DM data mining process.	L3	4	3	8
		OR				
8	a)	Discuss the various applications of data mining.	L2	4	1	8
	b)	By considering the application case **Data Mining in Cancer Research, analyze and answer the following:** i) Problem definition ii) Solution(s) to the problem ii) How can data mining be used for ultimately curing illnesses like cancer? iii) What do you think are the promises and major challenges for data miners in contributing to medical and biological research	L3	4	3	8

Q.No.		Question	BL	CO	PO	Marks
		endeavors?.				
		Module-5				
9	a)	What is sensitivity analysis? With examples, illustrate the types of sensitivity analysis and the approaches used in practice.	L3	5	3	8
	b)	With a neat diagram, illustrate the working of various components of an Expert System.	L3	5	1	8
		OR				
10	a)	What is Knowledge Engineering (KE)? With a neat diagram, discuss the role of various activities in the process of knowledge engineering.	L3	5	1	8
	b)	By considering an example application case of **American Airlines (AA) Uses Should-Cost Modeling to Assess the Uncertainty of Bids for Shipment Routes**, analyze and answer the following: **Problem definition**: American Airlines, Inc. (AA) is one of the world's largest airlines. Its core business is passenger transportation but it has other vital ancillary functions that include full-truckload (FTL) freight shipment of maintenance equipment and in-flight shipment of passenger service items that could add up to over $1 billion in inventory at any given time. AA receives numerous bids from suppliers in response to request for quotes (RFQs) for inventories. AA's RFQs could total over 500 in any given year. Bid quotes va1y significantly as a result of the large number of bids and resultant complex bidding process. Sometimes, a single contract bid could deviate by about 200 percent. As a result of the complex process, it is common to either overpay or underpay suppliers for their services. To this end, AA wanted a should-cost model that would streamline and assess bid quotes from suppliers in order to choose bid quotes that were fair to both them and their suppliers. i) Solution(s) to the problem ii)Besides reducing the risk of overpaying or underpaying suppliers, what are some other benefits AA would derive from its "should-be" model? iii)Discuss other possible methods with which AA could have solved its bid overpayment and underpayment problem. iv)To what concept/technique this application case is an example?.	L3	5	3	8