KUMARAGURU
college of technology
character is life

B.E DEGREE EXAMINATIONS:APRIL 2018

(Regulation 2014)

Eighth Semester

COMPUTER SCIENCE AND ENGINEERING

U14CSTE74 : Business Intelligence and its Application

COURSE OUTCOMES

CO1:   Explain about business intelligence architectures.

CO2:   Summarize various knowledge delivery methods.

CO3:   Summarize efficiency measures used in business intelligence.

CO4:   Explain about business intelligence applications.

CO5:   Apply business intelligence concepts in a problem.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1.   Match list I with list II and select the correct answer using the codes given below.   CO1   [K$_2$]

List I	List II
A. What-if analysis	1. Data warehouse
B. ETL	2. Performance calculation
C. Company's stakeholder	3. Knowledge sharing
D. Extranet	4. Investor

	A	B	C	D
a)	4	3	2	1
b)	3	4	2	1
c)	4	2	1	3
d)	2	1	4	3

2.   _____ helps to choose the best solution from several solutions available.   CO1   [K$_2$]

a)   Optimization   b)   Data mining

c)   Multi-dimensional cube analysis   d)   Data Exploration

3. The _____ of a DMU are defined as the product of the inputs used by the unit and the corresponding optimal weight.   CO3 [K₂]

   a) Real inputs   b) Dynamic inputs

   c) Virtual inputs   d) Static inputs

4. Which of the following are used for machine learning?   CO5 [K₂]

   i) Artificial neural networks

   ii) Reporting software

   iii) Bayesian networks

   iv) Decision trees

   a) i,ii, iii   b) ii,iii, iv

   c) i,ii, iv   d) i,iii, iv

5. _____ is the task of grouping a set of objects in such a way that objects in the same group are more similar to each other than to those in other groups.   CO3 [K₂]

   a) Similarity matching   b) Prediction

   c) Object gathering   d) Clustering

6. Sentiment analysis is a sub-task of _____ .   CO5 [K₂]

   a) Text analytics   b) Text summarization

   c) Data mining   d) Optimization

7. Assertion (A): Image mining is a type of content mining.   CO4 [K₂]

   Reason (R): Content mining involves the analysis of the content of web pages to extract useful information.

   a) Both A and R are individually true and R is the correct explanation of A   b) Both A and R are individually true but R is not the correct explanation of A

   c) A is true but R is false   d) A is false but R is true

8. Assertion (A) :A heat map helps for visualization of data.   CO2 [K₂]

   Reason (R)   :Heat map is an indicator of magnitude in the context of critical value ranges.

   a) Both A and R are individually true and R is the correct explanation of A   b) Both A and R are individually true but R is not the correct explanation of A

   c) A is true but R is false   d) A is false but R is true

9. _____ are businesses that collect industry-wide data and enhance and re-organize data giving value addition to customers.   CO2 [K₂]

   a) Operational analytics users   b) Power users

   c) Casual users   d) Data aggregators

10. Arrange the following steps in sequential order for Sales-force design.   CO4 [K₂]

    (i)   Segmentation and sales activity

    (ii)   Sales territory allocation to agents

    (iii)   Sales and communication channels

    (iv)   Sales force sizing

a) (ii),(iv),(iii),(i)   b) (i)(iii)(iv)(ii)

c) (iii),(i),(ii),(iv)   d) (ii),(iii),(iv),(i)

PART B (10 x 2 = 20 Marks)

(Answer not more than 40 words)

11.	Define business intelligence.	CO1 [K₁]
12.	List any two advantages of mathematical models	CO1 [K₂]
13.	Distinguish between power and business users.	CO2 [K₂]
14.	How is a bubble chart different from a gauge?	CO2 [K₂]
15.	What is called pattern matching?	CO3 [K₂]
16.	State the purpose of data development analysis. What is the main efficiency measure used for it?	CO3 [K₂]
17.	Distinguish between B2B and B2C activities.	CO4 [K₂]
18.	Draw a 2-dimensional chart to illustrate segmentation of customers of a mobile telephone company for retention analysis.	CO4 [K₂]
19.	Define supervised machine learning.	CO5 [K₁]
20.	What is text analytics? For performing this, mention any two softwares that are used.	CO5 [K₂]

Answer any FIVE Questions:-
PART C (5 x 14 = 70 Marks)
(Answer not more than 300 words)

Q.No. 21 is Compulsory

21. Consider a fan manufacturing company that needs to develop a business intelligence system that would help it to reduce the cost of making fans and selling them at a profit.What are the main components that would be included in this system's architecture by the IT manager while developing it? Explain using diagrams, the cycle of business intelligence analysis and also about these components.   CO1 [K₂]

22. (a) How are parameterized reports helpful in Self-service reporting? What are the advantages of ad hoc querying? (7) CO2 [K_2]

(b) Explain how sparklines, scoreboards and dashboards are useful in knowledge delivery. (7) CO2 [K_2]

23. (a) A college wishes to develop a business intelligence system. What are the different phases involved in its development? Explain using illustration. (9) CO1 [K_2]

(b) How is outlier analysis done for pattern matching? (5) CO3 [K_2]

24. (a) Explain about the working of CCR model. (7) CO3 [K_2]

(b) How will you identify the good operating practices for data envelopment analysis? (7) CO3 [K_2]

25. (a) XYZ pharma wishes to perform sales force management. Suggest a method to design the sales force and explain about the various decision processes in its management using illustration. (9) CO4 [K_2]

(b) Outline the features of relational marketing. (5) CO4 [K_2]

26. How is logistics planning done in the food industry? Using illustration, explain about the architecture of the logistic production optimization system. State its main advantages. CO4 [K_2]

27. (a) Explain how machine learning is helpful for decision making. (7) CO5 [K_2]

(b) What are the advanced visualization techniques that would help us in the future? (7) CO5 [K_2]

****