GUJARAT TECHNOLOGICAL UNIVERSITY
MBA - SEMESTER– II EXAMINATION – WINTER 2019

Subject Code: 4529201   **Date: 24-12-2019**

Subject Name: Business Analytics

Time: 2.30 PM to 5.30 PM   **Total Marks: 70**

Instructions:
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q. No.	Question Text and Description	Attribute / Type	Marks
Q.1	Briefly explain the below listed terms with an example. (a) Business Intelligence (b) Deception Detection (c) Data Mart (d) Visual Analytics (e) Sentiment Analysis (f) Key Performance Indicator (KPI) (g) Data Mining		**14**
Q.2 (a)	What is Business Analytics? Discuss the need and explain the components of Business Analytics with relevant examples.		**07**
(b)	Business Intelligence can have a profound impact on corporate strategy, performance and competitiveness. Use of BI in customer centric organizations aids Customer Relationship Management through improved services. Discuss with relevant examples the applications of Business Intelligence for improved business decision making.		**07**
	OR		
(b)	Make a list of what you think an OLTP system might be recording for every transaction that you make at a superstore. Discuss the difference between OLTP and OLAP with relevant examples.		**07**
Q.3 (a)	Define Data Warehouse. What are the characteristics of Data Warehousing? List the major components of the Data Warehousing Process.		**07**
(b)	A newly opened restaurant wants to collect feedback from its customers on the ambience of the restaurant, the quality and quantity of the food served the hospitality of the restaurant staff etc. Design an appropriate feedback form for the restaurant and comment on the type (structured, semi-structured or unstructured) of data that will be collected by this form.		**07**
	OR		
Q.3 (a)	What is Business Reporting? Discuss the role of Data Visualization and Visual Analytics for improved business decision making.		**07**

(b) What are the major Data Mining application areas? List and explain with examples the commonalities of these areas that make them suitable for Data Mining applications. **07**

Q.4 **(a)** What is text mining? Discuss with relevant examples some of the application areas of text mining in the context of Natural Language Processing. **07**

(b) Many top level corporate organizations use Business Performance Management processes, methodologies, metrics and technologies for effective implementation of their strategy. Discuss the four phases of the Business Process Management Cycle with an example. **07**

OR

Q.4 **(a)** List and explain the most critical success factors for Big Data Analytics. **07**

(b) What is Social Media Analytics? Discuss with examples the increasing popularity of Social Media Analytics among consumer companies for influencing consumer decision making. **07**

Q.5 **CASE STUDY:**

With changing lifestyle and accelerated pace of life, most people today are finding ways to stay active and healthy. Though with right intentions, people find it tough and lack the motivation needed to keep them on track for a healthy and active lifestyle. 501plus, a startup company has developed a personalized mobile prediction platform called Outside that keeps users active. The application is based on the quantified self approach which makes use of technology to self track the data on a person's habits, analyzes it and makes personalized recommendations.

The company assumed that people are most likely to succeed in changing their lifestyles when they are given small micro goals that are easier to achieve. They built 'Outside', as a personalized product that engages people in these activities and enables them to understand the long term impacts of short term activities

After the user enters basic data such as gender, age, weight, height and the location where he or she lives a behavior profile is built and compared with data from Practice Fusion and CDC records.. A life score is calculated using predictive analytics. This score gives the estimated life expectancy of the user. Once registered, users can begin discovering health opportunities, which are characterized as missions on the mobile interface. These missions are specific to the places based on the user's location. Users can track activities, complete them, and get a score that is credited back to a life score. Outside also enables its users to create diverse, personalized suggestions by keeping track of photographs of them doing each activity.

These can be used for suggestions to others, based on their location and preferences. A leader board allows a particular user to find out how other people with similar characteristics are completing their missions and inspires the current user to resort to healthier living. In that sense it also combines social media with predictive analytics.

Today most Smartphone's are equipped with accelerometers, and gyroscopes to measure jerk and orientation and sense motion. Many applications use this data to make the user's experience on the Smartphone better. Data on accelerometer and gyroscope readings is publicly available and can be used to classify various activities like walking, running, lying down and climbing.

Recently a platform hosted a competition aimed at identifying muscle motions that may be used to predict the progression of Parkinson's Disease. Parkinson's disease is caused by a failure of the central nervous system which leads to tremors, rigidity, slowness of movement, and potential instability. The objective of the competition in to best identify markets that can lead to a predicting the progression of this disease. This particular application os advanced technology and analytics is an example of how these two can come together ot generates extreme useful and relevant information.

	(a)	How can location based analytics help individual consumers?	07
	(b)	What other aspects of personal consumers can be predicted by using the concept of predictive analytics by companies from healthcare sector?	07

OR

Q.5	(a)	How can Smartphone data be used to predict medical conditions?	07
	(b)	How can similar applications be conceived for telecom, retail and financial services? Suggest some ideas for the same.	07

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