

**GUJARAT TECHNOLOGICAL UNIVERSITY****MBA PART TIME - SEMESTER-III EXAMINATION – WINTER 2020****Subject Code:4539901****Date:06/01/2021****Subject Name:Business Analytics (BA)****Time:10:30 AM TO 12.30 PM****Total Marks: 47****Instructions:**

1. Attempt any two questions from Q1 to Q4.
2. Q5 & Q6 are compulsory.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

- Q.1** (a) Give definition of following terms: **06**
1. Data Science
  2. OLTP
  3. OLAP
- (b) Give definition of following terms: **06**
1. Digital data
  2. Data Mining
  3. Big data
- Q.2** (a) Explain various types of business analytics with proper examples. **06**
- (b) What is business intelligence? Explain components of business intelligence. **06**
- Q.3** (a) Explain different types of charts and graphs used in analytics. **06**
- (b) What is text mining and web mining? Explain difference between both of them. **06**
- Q.4** (a) Explain role of sales and marketing analytics in insurance sector. **06**
- (b) What is dashboard? Discuss the role of dashboard in management decision making. **06**

**Q.5**

Healthcare systems around the world are facing a multitude of challenges. Aging populations with chronic illnesses, newly resistant strains of infectious disease, and revolutionary—but expensive—new treatments and technologies are all putting a strain on healthcare providers and payers. The greatest strain, however, often falls on the patients.

That strain can be illustrated with a few figures:

- 100 million people worldwide are pushed into poverty each year by personal healthcare expenditures.
- 1.5 million patients annually in the US are harmed by errors in the way medications are prescribed, delivered, or taken.
- In 10 patients in the European Union suffer from healthcare-related infections.
- 15 percent of diagnoses are estimated to be inaccurate or incomplete.

Listening and being attentive to patient needs and taking action to keep patients satisfied is now a critical component of healthcare delivery. Even after a successful treatment for a major illness, a patient might leave a facility dissatisfied for any number of reasons. And these patients are better informed than in the past and are using social media to share information about their experiences. Hospitals or clinics need to know how satisfied or dissatisfied their patients are and identify those aspects of their service that are in the most urgent need of improvement. Perhaps the easiest way to find the answers to these questions is simply to ask. Software applications now enable hospitals to survey patients quickly and conveniently, examine survey data in bulk, and quantify the qualitative judgments of patients and others who come in contact with the healthcare facility.

For example, most healthcare providers use websites to speed up and simplify many patient-provider interactions. Data mining software can analyze variables such as time spent on the site, forms completed, forms abandoned, frequency of use, seasonality and more, to help providers determine if the websites are delivering the intended information and service, when, and to whom.

- (a)** Explain role of data mining in health care sector with proper examples. **5.5**
- (b)** Can text and web analytics will be helpful to the hospitals for the betterment of their services? **5.5**

**OR**

- Q.5** (a) Suggest various kinds of analytics which can be adopted by the hospitals. **5.5**  
(b) Which are the limitations of present softwares used by hospitals and how analytics can help to remove these limitations? **5.5**

**Q.6** The ABC limited is the new age online video library provides various films in different languages. The service is available with the help of mobile app as well as with the help of website. The success totally depends on the data mining tools and techniques. By making a specific data mining program, they have clustered into various groups like Hindi, English, Gujarati, Telugu, and other languages of India. The viewers can identify based on the title, topic, artists, genres, year wise, and then the program will find the film from the database. They also provide opinion in terms of like, dislike, and comments for each of the movies. This again used by another data mining tool for refining their results. They also use various factoring methods for selection of songs.

- (a) Which are the variables data mining used to identify the require films? **06**  
(b) Explain pros and cons of existing methods used by the company. **06**

**OR**

- Q.6** (a) Do you think data mining method used to identify the film is appropriate? Give proper justification of your answer. **06**  
(b) Can you suggest better data mining method? **06**

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