

**GUJARAT TECHNOLOGICAL UNIVERSITY****MBA(PART TIME) SEMESTER– III EXAMINATION – WINTER 2019****Subject Code: 4539901****Date: 23-12-2019****Subject Name: Business Analytics****Time: 10:30 AM TO 1.30 PM****Total Marks: 70****Instructions:**

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

- Q.1 (a)** 1. Business Analytics **14**  
 2. Business Intelligence  
 3. Data Warehouse  
 4. Data Visualization  
 5. KPI  
 6. Data Mining  
 7. Data lake

- Q.2 (a)** Explain various components of business intelligence with proper examples. **07**  
**(b)** Explain types of business analytics and discuss how companies can use these for betterment of its business. **07**

**OR**

- (b)** Explain difference between OLAP and OLTP with examples. **07**  
**Q.3 (a)** Explain different types of digital data with examples. **07**  
**(b)** Explain concept of data visualization also discuss how visual analytics helps the companies in achieving their target. **07**

**OR**

- Q.3 (a)** Explain various applications of text mining with examples. **07**  
**(b)** Explain web mining in online retail sector. **07**

- Q.4** The global healthcare industry is at a crisis point. Escalating costs, inconsistent quality, a critical shortage of skilled workers and an increasing demand for services are causing both providers and payers of care to look for innovative ways to increase operating margins, reduce costs and improve quality and safety —while increasing access to care. Today’s financial climate has sparked an even broader range of new challenges for healthcare organizations, forcing

many institutions to operate in a bunker mode, with management tempted to keep doing what had worked in the past—in the hope that it will continue to work in the future. Given the current economy, if there were ever a time for the healthcare industry to adopt performance management principles, processes and technologies that time is now. This paper will discuss how healthcare institutions can leverage performance management capabilities to reduce costs, improve care quality and promote access and transparency while driving toward sustainable and profitable growth for the organization.

Both experience and history show that giving into the temptation to rely on the status quo can be a fatal mistake. However, staying ahead for healthcare organizations isn't easy. Data pours in from multiple systems, facilities and service lines. And IT departments are challenged to provide solutions that enable productivity and agility, despite tight budgets. Manual processes, inefficiencies and lack of accountability add to the mix.

- (a) Explain the role of business intelligence in health care with consideration of above situations. **07**
- (b) How dashboard can be utilized in health care sector. **07**

**OR**

- Q.4** (a) If business analytics is applied, then discuss with examples which types of analysis and reporting can be generated. **07**
- (b) How predictive analysis will help to improve the performance management. **07**

**Q.5** Today, it's particularly important that government agencies be able to detect patterns in large, complex datasets and make critical connections. Connections that link actions to actors, so that potential threats to the public good can be minimized or even eliminated. Making these connections requires accessing information of all types, often from disparate sources, to provide a foundation for strategic and tactical decision-making; and then providing insight to those who can make decisions and take action. Predictive analytics technologies combine advanced analytical techniques with decision-support capabilities. Solutions incorporating predictive analytics enable various types of government organizations to explore data and gain insights that lead to informed decisions. For example:

- Law enforcement agencies look for patterns in criminal behavior and suspicious activity. This enables them to deploy personnel more effectively and to identify possible motives and suspects.

- Auditors of tax returns and Medicare/Medicaid claims compare information across cases to understand normal activity patterns. In this way, they can identify cases that deviate from the norm and, therefore, warrant further investigation.
- Disease management analysts study events that led to favorable outcomes across time and patient populations, in order to develop optimal treatment protocols.
- Public health authorities monitor syndromic information from various sources, looking for elevated levels of certain symptoms that signal a widespread disease outbreak. This accelerates the process of uncovering the cause of the outbreak.
- Network analysts protect the security of computer and communications systems by detecting “cyber threats.” These include unauthorized access and the release of computer worms or viruses.

- (a) Which types of data will be generated, if government uses predictive analysis for their decision making? **07**
- (b) Which types of benefits will be available, if government uses predictive analysis for their decision making? **07**

**OR**

- Q.5** (a) Explain the role of data mining in predictive analysis. **07**
- (b) Which types of data security threats will be generated while using predictive analysis **07**

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