

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA-SEMESTER-II-EXAMINATION-SUMMER-2025

Subject Code: 4529201

Date: 30/05/2025

Subject Name: Business Analytics

Time: 10:30 AM TO 01:30 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1** Explain the following terms: **14**
- (a) Meta data
 - (b) OEM
 - (c) Big Data
 - (d) Sentiment Analysis
 - (e) Prescriptive Analysis
 - (f) Data Lake
 - (g) MOLAP
- Q.2** (a) Differentiate Business Intelligence and Business Analytics. **07**
- (b) As a forecaster, how you will use BI and BA tools to improve company's relations with customers? **07**
- OR**
- (b) Explain OLTP Model with reference to student data stored in an educational institute. **07**
- Q.3** (a) It is always difficult to store unstructured data in comparison to structured one. Do you agree? Justify **07**
- (b) Visual Analytical tools always helps to take quick decisions. Explain with suitable example. **07**
- OR**
- Q.3** (a) How ETL is the vital part of any data warehouse? **07**
- (b) Today's generation is the generation of social media. How you will use this fact to grow your business. **07**
- Q.4** (a) What is business performance management cycle? Explain with example. **07**
- (b) Fraud detection application is one of the useful applications for any business unit. Explain this with reference to telecommunication sector. **07**
- OR**
- Q.4** (a) Business Analytics supports every operational function. How? **07**
- (b) What is Big data? Explain its characteristics. **07**

Q.5

CASE STUDY:

When we think about the use of Business Intelligence in the airline industry, we might immediately look at it from a customer perspective. Seat allotments, ads, frequency of flights and locations, and so on. But when Delta Airlines implemented BI to improve the travel experience, it was for a whole other reason: baggage.

Delta has invested over \$100 million (and counting) in BI systems to track and improve baggage handling. With the data collected and displayed in a digestible manner by the BI solution, teams at airports and in the Delta headquarters have been able to identify the root cause(s) of baggage mishandling and delays. This has enabled them to make fast and effective decisions that drastically reduce baggage loss and damage, making Delta the most reliable airline in terms of baggage and therefore improving their business.

Though Delta has applied BI extensively elsewhere in its business, the focus on baggage handling has allowed it to create a niche in an otherwise competitive industry with thin margins.

And, like the companies that appeared earlier on this list, Delta also uses BI to transform their passenger data into more effective loyalty programs that take all the best parts of travel and spending habits. They're able to target customers with their best promotions, right when they're likely looking to make a purchase. Not only is the airline able to secure a sale, but they are also able to cut down on their advertising spend.

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|-----|---|-----------|
| (a) | Highlight the use of BI for airline industry in above case. | 07 |
| (b) | What suggestions you would give to delta to attract more customers? | 07 |

OR

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| Q.5 | (a) | What do you think what was the root cause of luggage problems? | 07 |
| | (b) | Explain how to design an effective loyalty program? | 07 |
