

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MBA– SEMESTER - IV-EXAMINATION- SUMMER-2023**

**Subject Code: 4549296****Date: 21/06/2023****Subject Name: Advanced Data 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. No.	Question Text and Description	Marks
Q.1	Explain the following terms. (a) Data Velocity (b) Cash Flow v/s Free Cash Flow. (c) Customer Life time value (d) Text mining (e) Data warehouse (f) Social media Analytics (g) HRIS	<b>14</b>
Q.2	(a) What is Big Data? Explain its Characteristics. Name few big data platforms. (b) Which are three categories of Cash flow statement? Explain in light of cash flow statement analytics.	<b>07</b> <b>07</b>
<b>OR</b>		
	(b) What customer segmentation analytics uncovers? How?	<b>07</b>
Q.3	(a) Explain the applications of analytics in business functions. (b) What do you think are the common elements of Financial Analysis? Explain.	<b>07</b> <b>07</b>
<b>OR</b>		
Q.3	(a) Write a note on Ethical issues in HR analytics. (b) Is it possible for a company to have a positive cash flow but still be in serious financial trouble? Explain in detail.	<b>07</b> <b>07</b>
Q.4	(a) What is sentiment analysis? Explain giving examples. (b) How can product profitability analysis conducted? Explain.	<b>07</b> <b>07</b>
<b>OR</b>		
Q.4	(a) Which are the benefits of Marketing Analytics? Explain. (b) Customer relationship Management is adopted by numerous industries now-a-days. Do you agree? Explain.	<b>07</b> <b>07</b>

**Q.5**

**The Algorithm That Tells the Boss Who Might Quit**

Employers want to know who has one foot out the door.

As turnover becomes a bigger worry and expense, companies are analyzing a vast array of data points to determine who is likely to leave a post. The idea, say people who run analytics teams, is to give managers early warning so they can take action before employees jump ship. Corporate data crunchers play with dozens of factors. The data often reveal a complex picture of what motivates workers to stay—and what causes them to look elsewhere.

As the employment picture improves, companies are focusing more on retaining workers, largely because replacing them is costly. The median cost of turnover for most jobs is about 21% of an employee’s annual salary, according to the Center for American Progress, a liberal-leaning think tank. And it can cost, on average, some \$3,341 to hire a new employee, according to the Society for Human Resource Management.

No single piece of data predicts whether an employee will stay or go, though many employers wish it were so. Data scientists create models to predict which workers might leave a company in the near future, combining a range of variables and testing the predictions over time. They might refine the calculations depending on which variables are most predictive for a given company or group of employees.

“Our goal is to never say the only reason we are coming to talk to you is because an algorithm told us to do so,” says John Callery, director of people analytics at AOL Inc. on a program to help predict attrition down to the individual employee. Mr. Callery says it is too early to tell whether AOL’s retention figures will improve, or by how much, since it takes at least a year to test a predictive model.

“One of the things that people want to find is that one nugget, that key thing that correlates with someone leaving, but it is never that simple,” says Thomas Daglis, a data scientist at Ultimate Software.

- (a) “Our goal is to never say the only reason we are coming to talk to you is because an algorithm told us to do so” How will you manage collecting data/information from employees? **07**
- (b) “Companies are analyzing a vast array of data points to determine who is likely to leave a post.” If asked to you, which data points you would suggest to be collected by company? Why? **07**

**OR**

**Q.5**

- (a) “Data scientists create models to predict which workers might leave a company in the near future” Which models you would suggest? **07**
- (b) Do machine run algorithms provide accurate & reliable results? Is human intervention required in predictive analysis? Give answer considering HR function holistically. **07**

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