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# BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – MBA-2022

Course Name – Financial Analytics

Course Code - FM301

( Semester III )

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Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

## Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify type of data classification that involves grouping data based on predetermined categories or labels
- a) Clustering  
b) Regression  
c) Classification  
d) Association
- (ii) Name the type of risk on stock measured by Beta.
- a) Absolute return  
b) Systematic risk  
c) Total risk  
d) Historical performance
- (iii) The profitability index (PI) is calculated as:
- a)  $PI = \text{Net Income} / \text{Total Assets}$   
b)  $PI = \text{Net Present Value} / \text{Initial Investment}$   
c)  $PI = \text{Revenue} - \text{Expenses}$   
d)  $PI = \text{Discount Rate} - \text{IRR}$
- (iv) In the context of stock valuation, the Gordon Growth Model is primarily used for:
- a) Valuing growth stocks  
b) Valuing dividend-paying stocks with constant growth  
c) Valuing distressed companies  
d) Valuing preferred
- (v) The fundamental analysis approach has been associated with \_\_\_\_\_.select the correct answe
- a) Uncertainties  
b) Certainties  
c) Ratios  
d) Balance Sheets
- (vi) Write the number of independent variables Used in Multiple linear regression for predicting outcomes.
- a) One independent variable  
b) Multiple independent variables  
c) No independent variables  
d) None of the above
- (vii) Apply your knowledge to write the forecasting method used in making predictions based on the average value of past data points.
- a) Exponential Smoothing  
b) Moving Averages  
c) Time Series Decomposition  
d) Regression Analysis

- (viii) Show the application of predictive analysis in financial areas to detect fraudulent transactions.
- a) Simple linear regression  
 b) Time series analysis  
 c) Logistic regression  
 d) Descriptive statistics
- (ix) Write the type of regression technique that is appropriate for predicting the likelihood of a customer defaulting on a loan.
- a) Simple linear regression  
 b) Multiple linear regression  
 c) Logistic regression  
 d) Multinomial regression
- (x) A financial analyst uses a regression model to predict stock prices based on historical data. Write the type of regression is most likely being applied.
- a) Simple linear regression  
 b) Multiple linear regression  
 c) Logistic regression  
 d) Multinomial regression
- (xi) From your understanding show the categories of dependent variable found in multinomial logistic regression.
- a) Two  
 b) Three or more  
 c) Only one  
 d) It depends upon independent variables
- (xii) Identify primary goal of Financial Analytics
- a) Maximize shareholder wealth  
 b) Minimize employee turnover  
 c) Increase market share  
 d) Reduce operational costs
- (xiii) Describe the purpose of financial ratio analysis in Financial Analytics
- a) To predict future stock prices  
 b) To assess a company's financial performance and stability  
 c) To calculate taxes owed by a company  
 d) To determine executive compensation
- (xiv) Show the primary purpose of Business Intelligence (BI) tools.
- a) Data storage  
 b) Data analysis  
 c) Data collection  
 d) Data mining
- (xv) Name software that is commonly used for creating and managing spreadsheets in a business context.
- a) Photoshop  
 b) Excel  
 c) AutoCAD  
 d) Outlook

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Identify the key difference between logistic regression and simple linear regression? (3)
3. Explain the concept of R-squared ( $R^2$ ) in the context of regression analysis. (3)
4. Give an example of applying multiple linear regression in the financial sector (3)
5. Compare and contrast horizontal and vertical analysis techniques, highlighting when each is more useful in financial analysis. (3)
6. Decide a hypothetical scenario of applying both simple linear regression and logistic regression in the financial sector for decision-making. (3)

OR

Decide a plan for applying predictive analysis in the financial industry to optimize portfolio management. (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe what is the Dow Theory of investment analysis (5)
8. Evaluate advantage of using free float market capitalisation. (5)



9. Analyse the concept of free float factors.

10. Critically evaluate benefits of using survival techniques

11. Describe the concept of Du pont analysis.

12. Evaluate the limitations of using only financial ratios in assessing a company's financial health

(5)

(5)

(5)

OR

From the following figures of income statement carry out horizontal analysis and evaluate the results

	2023	2022
Sales	3850000	3432000
COGS	3250000	2864000
Gross profit	600000	568000
Selling & Adm exp.	330300	240000
Fixed exp.	100000	100000
Depreciation	20000	189000
EBIT	149700	209100
Interest	76000	62500
EBT	73700	146600
Taxes	29480	58640
Net income	44220	87960
Tax rate	40%	40%

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