JHARKHAND Rai University
RANCHI

End Semester/Reappear (Semester VI) Examination May 2025

Programme: BCA
Course: Introduction to Business Analytics **Full Marks: 70**
Course Code:3COE302 **Time: 3 Hrs.**
Enrolment no. _____

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
	Section I			
1	**Short Answer type questions.**			**4 x 5 = 20**
a	Describe the concept of Data Mining and explain how it supports Business Analytics.	CO1	Remember	
	or			
	State three examples of how business analytics is used in organization.	CO1	Understand	
b	Explain what do you understand by Visualization of Data.List out different methods for the same.	CO2	Understand	
	or			
	Illustrate the process of Data preparation in Analytics Methodology.	CO2	Apply	
c	Explore the concept of trend analysis, highlighting its significance. Describe the various types of trends commonly observed in time series data.	CO3	Understand	
	or			
	Explain the concept of a moving average and how it is used in time series analysis.	CO3	Understand	
d	Explain the concept of Artificial Intelligence (AI) and describe two ways it is used in business operations.	CO4	Remember	
	or			
	Explain how Web content mining and Web usage mining differ from each other with reference to their purposes.	CO4	Understand	
	Section II			
	Long Answer type questions.			**3 x 10 = 30**
2	Examine the differences between structured, semi-structured, and unstructured data by evaluating their defining features. Provide relevant examples to illustrate each category.	CO1	Analyze	
	or			
	Examine the distinctions between relational and non-relational databases, highlighting their key differences. Provide practical examples to illustrate how each type is used in real-world applications.	CO1	Evaluate	
3	Determine the mean, median, and mode for the following dataset representing student scores: **Marks (Mid-points)** / **Number of Students** 57 / 3 59 / 7 61 / 15 63 / 50 65 / 135 67 / 120 69 / 47 71 / 22	CO2	Evaluate	
	or			
	Compute the range and quartile deviation for the given dataset, evaluating their effectiveness as measures of dispersion. Additionally, determine the coefficient of quartile deviation to analyze variability within the data. **Heights (in inches)** / **No. of persons** 56 / 4 58 / 5 60 / 7 61 / 14 63 / 9 64 / 6 66 / 5 67 / 3 69 / 2	CO2	Evaluate	
	Outline the fundamental components of the Holt-Winters exponential smoothing method and explain its operational framework in forecasting time series data.	CO3	Analyze	

	or			
4	The company has gathered demand data and intends to apply exponential smoothing for forecasting, using a smoothing constant (α\alpha) of 0.4. Below is the recorded actual demand over six years: **Year** / **Actual Demand (AtA_t)** 1 / 310 2 / 365 3 / 395 4 / 415 5 / 450 6 / 465	CO3	Analyze	
Section III				
	Application based questions			
5	Analyze the tools and techniques linked to Big Data, assessing how organizations utilize them to strengthen their competitive strategic edge.	CO4	Create	**1 x 20 = 20**
	or			
	Develop a comprehensive analysis of how Artificial Intelligence is transforming modern business models. Support your discussion with real-world examples showcasing its impact.	CO4	Evaluate	

COURSE OUTCOME

On completion of the Course, the students will be able to:

CO 1: Demonstrate the awareness and Knowledge of Business Analytics

CO 2: Interpret the analytics methodology

CO 3: Assess the relevance and effectiveness of business analytics solutions

CO 4: Apply the knowledge of technical skills in descriptive and predictive modeling to support business decision making