

QP Code: D142003		Total Pages: 2		Name:						
				Register No.						
SECOND SEMESTER (CUFYUGP) DEGREE EXAMINATION, APRIL 2026										
MANAGEMENT STUDIES										
BBA2MN102/BBA2CJ103 FOUNDATIONS FOR BUSINESS ANALYTICS										
2024 Admission onwards										
Maximum Time: 2 Hours				Maximum Marks: 70						
Section A										
All Questions can be answered. Each Question carries 3 marks (Ceiling: 24 Marks)										
1	What is a Sample Space? Give an example.									
2	What is meant by Independent Events in probability?									
3	What is a Chain Index Number?									
4	What are Regression Lines?									
5	What do you mean by Probabilistic Sampling?									
6	What is a Cumulative Distribution Function (CDF)?									
7	Define Correlation.									
8	What is a Time Series?									
9	What are the properties of a Binomial Distribution?									
10	What do you mean by Joint Probability?									
Section B										
All Questions can be answered. Each Question carries 6 marks (Ceiling: 36 Marks)										
11	Define Business Analytics. What are the different types of Business Analytics?									
12	What do you mean by Non-Probability Sampling? Briefly explain its Methods or Techniques.									
13	Construct 3 yearly moving averages from the following data:									
	Year	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Annual sales in lakhs	43	45	50	54	51	49	52	56	60
14	Calculate the correlation coefficient of the given data:									
	X	3	2	1	5	4				
	Y	8	4	10	2	6				
15	Given below are observed and expected frequencies in a study made: Observed (O): 25 24 42 40 50 Expected (E): 30 32 35 36 48 Apply Chi-Square Test and examine whether the observed frequencies are in agreement with the expected frequencies.									
16	In a normal distribution, 17 % of the items are below 30 and 17 % of the items are above 60. Find the mean and standard deviation.									
17	Given $\sum P_0 = 400$, $\sum P_1 = 550$, find out the Index number using the Simple Aggregative method.									
18	A ball is drawn from a bag containing 4 white, 6 black and 5 green balls. Find the probability that a ball drawn is: (a) White (b) Green									

	(c) Black (c) Not Green (d) Green or white (f) Green or Black							
Section C								
Answer any ONE. Each Question carries 10 marks (1x10=10 Marks)								
19	Obtain the Regression Equation of Y on X and estimate Y when X=55 from the following:							
	X	40	50	38	60	65	50	35
	Y	38	60	55	70	60	48	30
20	Calculate the Spearman's Rank Correlation Coefficient between the given Economics and Statistics marks:							
	Economics Marks	80	56	50	48	50	62	60
	Statistics Marks	90	75	75	65	65	50	65

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BBA2CJ103 / BBA2MN102 - FOUNDATIONS FOR BUSINESS ANALYTICS										
2024 Admission onwards										
Maximum Time: 2 Hours						Maximum Marks: 70				
Section A										
All Questions can be answered. Each Question carries 3 marks (Ceiling: 24 Marks)										
1	What is a Sample Space?									
2	Define Business Analytics.									
3	Define a Random Experiment.									
4	What is the purpose of Index Numbers?									
5	What is the meaning of Regression Analysis?									
6	What are Mutually Exclusive and Exhaustive Events?									
7	What are Parabolic and Logarithmic Trends?									
8	What is a Chi-Square Distribution?									
9	What is Sampling and what is meant by a Sample?									
10	What are Independent Events?									
Section B										
All Questions can be answered. Each Question carries 6 marks (Ceiling: 36 Marks)										
11	Briefly explain the various Probabilistic Sampling and Non-Probability Sampling Methods or Techniques.									
12	What do you mean by a Time Series? What are the Components of Time Series?									
13	Three unbiased coins are tossed. What is the probability of obtaining: (a) All heads (b) 2 heads (c) One head (d) At least one head (e) At least two head (f) At the most one head									
14	Compute a Price Index for the following by Simple Aggregate Method:									
	Commodity	A	B	C	D	E	F			
	Price in 1986 (₹)	20	30	10	25	40	50			
	Price in 1991 (₹)	25	30	15	35	45	55			
15	The Standard Deviation of two samples of sizes 10 and 14 from two normal populations are 3.5 and 3.0 respectively. Examine whether the Standard Deviation of the Population are equal.									
16	In a cafe, the customer arrives at a mean rate of 2 per minute. Find the probability of arrival of 5 customers in 1 minute using the Poisson distribution formula.									
17	Construct 3 yearly moving averages from the following data:									
	Year	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Annual sales in lakhs	43	45	50	54	51	49	52	56	60

18	Calculate the Correlation Coefficient for the following data: X = 21, 31, 25, 40, 47, 38 and Y = 70, 55, 60, 78, 66, 80										
Section C											
Answer any ONE. Each Question carries 10 marks (1x10=10 Marks)											
19	Calculate the Rank Correlation Coefficient between marks assigned to 10 students by Judges X and Y.										
	Sl. No:	1	2	3	4	5	6	7	8	9	10
	Mark by Judge X	52	53	42	16	45	41	37	38	25	27
	Mark by Judge Y	65	68	43	38	77	48	35	30	25	50
20	Calculate the Regression Coefficient and obtain the Lines of Regression for the following data:										
	X	1	2	3	4	5	6	7			
	Y	9	8	10	12	11	13	14			