

QP CODE: D2BBA2508	(Pages: 2)	Reg. No :	
		Name :	
SECOND SEMESTER FYUGP EXAMINATION, APRIL 2026			
(Regular - 2025 Admissions)			
Discipline Specific Core (DSC) Courses - Major			
BBA2CJ103 : Foundations for Business Analytics			
(Credits: 4)			
Time: 2 Hours		Maximum Marks: 70	
Section A			
Answer the following questions. Each carries 3 marks (Ceiling: 24 marks)			
1.	Define Business Analytics? State its importance.	BL1	CO1
2.	Define normal distribution.	BL1	CO2, CO3
3.	What is multiple linear regression? Write its equation.	BL1	CO4
4.	What is a chain index number?	BL1	CO5
5.	What is a sample? Give example.	BL1	CO1, CO4
6.	Distinguish between dependent event and independent event.	BL2	CO2, CO3
7.	What are the situations where Poisson distribution become the limiting case of Binomial distribution?	BL2	CO2, CO3
8.	What is systematic sampling? Give example.	BL1	CO1, CO4
9.	Define secular trend.	BL1	CO6
10.	Explain the uses of correlation and regression in business decision making.	BL2	
Section B			
Answer the following questions. Each carries 6 marks (Ceiling: 36 Marks)			
11.	Two coins are tossed. What is the probability of getting (1) both heads (2) one head (3) no head.	BL3	CO2, CO3
12.	A coin is tossed 8 times. What is the probability of obtaining 6 or more heads?	BL3	CO2, CO3
13.	What are the key aspects of central limit theorem?	BL2	CO3
14.	What is random variable? Write the properties of random variable.	BL3	CO2, CO3
15.	Distinguish between systematic sampling and cluster sampling.	BL5	CO3
(PTO)			

16.	Calculate Laspeyer's Index number from the following data:	BL3	CO5																													
<table><tr><th rowspan="2">Commodity</th><th colspan="2">Base Year</th><th colspan="2">Current Year</th></tr><tr><th>P0</th><th>q0</th><th>P1</th><th>q1</th></tr><tr><td>A</td><td>5</td><td>10</td><td>6</td><td>11</td></tr><tr><td>B</td><td>8</td><td>6</td><td>10</td><td>5</td></tr><tr><td>C</td><td>4</td><td>12</td><td>5</td><td>10</td></tr><tr><td>D</td><td>3</td><td>10</td><td>9</td><td>3</td></tr></table>		Commodity	Base Year		Current Year		P0	q0	P1	q1	A	5	10	6	11	B	8	6	10	5	C	4	12	5	10	D	3	10	9	3		
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17.	The data given below relates to the price and demand of a commodity over a period. Compute correlation coefficient between price and demand.	BL3	CO4																													
<table><tr><td>X</td><td>80</td><td>75</td><td>60</td><td>90</td><td>70</td></tr><tr><td>Y</td><td>12</td><td>15</td><td>13</td><td>9</td><td>14</td></tr></table>		X	80	75	60	90	70	Y	12	15	13	9	14																			
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18.	A committee of four people is to be appointed from 3 officers of the production department, 4 officers from the purchase department, 2 officers of sales department and one chartered accountant. Find the probability of forming the committee in the following manner. a) There must be one from each committee. b) The chartered accountant must be in the committee.	BL3	CO2, CO3																													
Section C																																
Answer any one question. Each carries 10 marks (1 x 10 = 10 Marks)																																
19.	Show that there is a perfect correlation between the following X and Y series X: 10 12 14 16 18 20 Y: 20 25 30 35 40 45	BL3	CO4																													
20.	Calculate Laspeyre's,Paasche's,Fisher's index number of the prices of the following data. <table><tr><th rowspan="2">Commodities</th><th colspan="2">Base year</th><th colspan="2">Current year</th></tr><tr><th>Price</th><th>Quantity</th><th>Price</th><th>Quantity</th></tr><tr><td>A</td><td>10</td><td>12</td><td>12</td><td>15</td></tr><tr><td>B</td><td>7</td><td>15</td><td>5</td><td>20</td></tr><tr><td>C</td><td>5</td><td>24</td><td>9</td><td>20</td></tr><tr><td>D</td><td>16</td><td>5</td><td>14</td><td>5</td></tr></table>	Commodities	Base year		Current year		Price	Quantity	Price	Quantity	A	10	12	12	15	B	7	15	5	20	C	5	24	9	20	D	16	5	14	5	BL3	CO5
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CO : Course Outcome																																
BL : Bloom’s Taxonomy Levels (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)																																