



ROLL NO.	
ID NO.	

PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF LAW

Max Marks: 40

Max Time: 180 Mins.

Weightage: 40 %

END TERM FINAL EXAMINATION

I Semester AY 2017-2018

Course: **BBL 301 Quantitative Techniques**

02 JAN 2018

Instructions:

- i. Write legibly
- ii. Calculators are permitted.

Part A

[5Q x 2 M= 10 Marks]

1. State the uses of index numbers.
2. What are the four components of time series?
3. Write and mention the type's regression line.
4. What is the classical definition of probability?
5. What is an identity matrix? Give example

Part B

[3Q x 5 M= 15 Marks]

6. Calculate the five-yearly Moving Average of the following

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
(000 tons)	105	115	100	90	80	95	85	75	60
Year	2009	2010	2011	2012	2013	2014	2015	2016	
(000 tons)	65	70	58	55	53	60	52	50	

7. Below are given the figures of production (in thousands tons) of a sugar factory

Year	2000	2001	2002	2003	2004	2005	2006
Production (000 tons)	76	87	95	81	91	96	90

Fit a straight line trend and estimate the production values (in 000 tons) for the year 2007.

8. From the following price and quantity data, compute Fisher's ideal index number for the following data.

Commodity	2000 (Base Year) Price (Rs)	2000(Base Year) Quantity (Kg)	2015 (Current Year) Price (Rs)	2015 (Current Year) Quantity (Kg)
A	8	6	12	5
B	10	5	11	6
C	7	8	8	5

Part C

[3 Q x 5 M= 15 Marks]

9. If matrix A, matrix B and matrix C is given as

$$A = \begin{bmatrix} 2 & 0 & 9 \\ -1 & 6 & 11 \\ 4 & 8 & -11 \end{bmatrix} \quad B = \begin{bmatrix} 1 & 2 & 3 \\ -1 & 0 & 0 \\ 1 & -1 & -4 \end{bmatrix} \quad C = \begin{bmatrix} 2 & 0 & -5 \\ 3 & 7 & 2 \\ -1 & 0 & -1 \end{bmatrix}$$

Find i. $A + 3B - 2C$ ii) $2A - B + 5C$

10. If $A = \begin{bmatrix} 2 & 3 \\ -1 & 4 \end{bmatrix}$ $B = \begin{bmatrix} 5 & -2 \\ -1 & 6 \end{bmatrix}$ $C = \begin{bmatrix} 0 & 2 \\ 1 & -3 \end{bmatrix}$
 Show $(A+B) + C = A + (B+C)$

11. A die is tossed and the number of points appearing on the uppermost face is observed. What is the probability of obtaining i.) an even number ii). an odd number iii) less than 3 iv) a six



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Max Marks: 30

Max Time: 120 Mins

Weightage: 30 %

2017 BBA/B.COM/BA, LL.B (H) I SEMESTER
MID TERM EXAMINATION

I Semester AY 2017-2018

Course: BBL 301 **Quantitative Techniques**

27 OCT 2017

9:30 am-11.30 am (FN)

Instructions:

- i. Write legibly
- ii. Calculators allowed

Part A

(5Q x 2 M= 10 Marks)

1. What are the three measures of Central Tendency? Name them.
2. Find the median of the series 32, 22, 29, 17,40,26,21.
3. What are the different measures of dispersion? Name them.
4. For the data, Mean = 5 Rs, Standrad Deviation = 2.6 Rs. Find Coefficient of Variation?
5. Define Standard Deviation and Variance?

Part B

(2Q x 5 M= 10 Marks)

6. Find the S.D from the following data 49,63,46,59,65,52,60,54
7. Consider the data to the monthly sales of 200 companies

Monthly Sales (in Lakhs)	300-350	350-400	400-450	450-500	500-550	550-600	600-650	650-700	700-750
No of Companies	5	14	23	50	52	25	22	7	2

Evaluate the arithmetic mean.

Part C

(2 Q x 5 M= 10 Marks)

8. What do you mean by Correlation? Find the coefficient of correlation from the following data.

X	65	63	67	64	68	62	70	76
Y	68	66	68	65	69	66	68	69

9. In a certain examination 10 students obtained the following marks in Mathematics and Physics. Find Spearman's rank correlation coefficient.

Student (Roll No)	1	2	3	4	5	6	7	8	9	10
Marks in Math	90	30	82	45	32	65	40	88	73	66
Marks in Physics	85	42	75	68	45	63	60	90	62	58