

Goa Vidyaprasarak Mandal's
GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE AND ECONOMICS
PONDA - GOA

B.Com. CBCS (SEMESTER – III) SUPPLEMENTARY EXAMINATION
AUGUST 2021

BUSINESS STATISTICS - I

Duration: 2 hours

Marks: 40

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- INSTRUCTIONS: i) Attempt all questions.
ii) Figures to the right indicate full marks.
iii) Use of non - programmable calculator is allowed.
iv) Graph paper may be used wherever necessary.

Q 1. Answer the following: (Any **five**) (5 x 2 = 10)

1. Distinguish between 'Population' and 'Sample' with an example.
2. Distinguish between Discrete data and Continuous data with suitable examples
3. The number of factories for 4 years is given below. Draw a bar diagram.

Year	1994	1995	1996	1997
Number of factories(in '000)	105	95	98	100

4. Find the mean deviation from mode for the following data
2, 5, 4, 3, 7, 6, 8, 5, 11, 9
5. Calculate Bowley's coefficient of skewness when $Q_1 = 5$, $Q_3 = 13$, mean = 6 and mode = 12.
6. Find x, if the cost of living index number for the data given below is 150.

Commodity	A	B	C	D	E
Weight	3	4	x	6	4
Index number	100	150	140	200	120

7. The ages of 8 participants in an event are given below

Participant	1	2	3	4	5	6	7	8
Age	37	19	31	29	21	26	33	36

Calculate the range and coefficient of range

8. Convert the following fixed base index numbers into chain base index numbers

Year	2011	2012	2013	2014	2015	2016	2017	2018
Index number	120	124	130	144	150	160	164	170

Q 2. Answer the following: (Any six)

(6 x 5 = 30)

1. Draw a histogram for the following data

Weight in kg	15 – 20	20 – 25	25 – 35	35 – 50	50 – 55
Number of boys	6	4	12	15	8

2. Find D_7 and P_{85} for the following data

Marks	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
Number of students	8	12	20	32	30	28	12	4

3. Calculate Bowley's coefficient of skewness for the following data

Class interval	5 – 10	10 – 15	15 – 20	20 – 25	25 – 30	30 – 35	35 – 40
Frequency	6	8	17	21	15	11	2

4. Calculate four yearly moving averages for the following data

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999
Production	98	105	103	100	107	106	103	102	112

5. The sales of two shops in a week are as follows

Shop A	50	30	40	60	20	50
Shop B	90	80	40	10	10	20

Find which of the shops has consistent sales.

6. Calculate Laspeyre's quantity index number and Paasche's price index number from the following data

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	2	7	4	8
B	5	4	6	10
C	4	10	5	14
D	2	13	2	19

7. Splice the following Index Number Series

Year	2005	2006	2007	2008	2009	2010
Series X	136	143	165	-	-	-
Series Y	-	-	176	187	198	189

8. Fit a straight line trend on the following data using the Least Squares Method.

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
y	4	7	7	8	9	11	13	14	17

