SARASWAT VIDYALAYA'S
SRIDORA CACULO COLLEGE OF COMMERCE & MANAGEMENT STUDIES
KHORLIM, MAPUSA, GOA

B.Com – Honors / B.Com - General (w. e. f. 2017-18)

S.Y.B.COM. SEMESTER END EXAMINATION, MAY/JUNE, 2019

SPECIAL REPEAT SEMESTER III

Subject:- BUSINESS STATISTICS - (GE-3) **(CBCS)**

M.Marks:- 80
Duration:- 2 hrs.

Instructions:- 1. Attempt all the questions.
2. Use of non-programmable calculator is allowed.
3. Each question carries equal marks (3 + 6 + 7 =) 16
4. Sub-questions of a question should be answered continuously.
5. Log table / graph paper will be supplied on request.

Q.1.a) Differentiate between Sample survey and Census survey.

b) Calculate the three yearly moving averages from the following data and determine the trend values. Which year is having a highest trend value?

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Production in ('000 quintals)	10	11	12	10	11	12	9	8	10

c) In a class, the average marks of 30 girls is 75 and that of boys is 70 in an examination. The average mark of the whole class is 73. Find the number of boys in the class.

OR

Q.1.x) Explain the terms i) Population unit ii)Population size iii) Sample

y) The following are the cost of living index numbers. Find out the trend values assuming five yearly cycle.

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cost of living index number	100	110	120	150	125	120	118	110	140

z) Compute mean and mode of the distribution given below:

Class mark	5	15	25	35	45	55
Frequency	3	8	12	15	22	25

Q.2.a) List some of the commonly use Central tendency values in research.

b) Fit a linear trend for the following series and hence estimate the figure for 1976.

Year	1966	1967	1968	1969	1970	1971
Assets	84	92	71	90	160	191

c) Draw a pie – diagram to indicate the breakup of the average expenditure of a family as given below.

Items	Expenditure in Rs
Food	240
Clothing	66
Rent	125
Fuel and lighting	57
Education	42
Miscellaneous	190

.OR.

Q.II.x) Write an appropriate word in the following:

i) The central tendency value that require all positive data values.

ii) Class interval having highest value of frequency.

iii) The total number of statistical units in a statistical investigation

y) Estimate the figure for 2007 for the data given below using method of least squares.

Year	2001	2002	2003	2004	2005	2006
Assets	84	92	71	90	160	191

z) Draw a less than ogive for the following data and hence find Median.

Class Mark	5	15	25	35	45
No. of persons	5	8	21	10	6

Q.3.a) Differentiate between Qualitative and Quantitative data.

b) Find the coefficient of mean deviation from median of the following data.

6 8 2 3 9 3 7

c) Find L_p and P_p from the following data.

Commodities	Base year		Current year	
	Price	Quantity	Price	quantity
A	4	6	5	5
B	5	8	7	7
C	6	10	7	9
D	2	12	4	10

.OR.

Q.III.x) Write a short note on "Survey".

y) Find Mean and Standard deviation for the following data:

Weight in Kg.	100-200	200-300	300-400	400-500
No. of employees	4	8	5	3

z) From the following data, Calculate:

i) Laspeyre's quantity index number

ii) Paasche's quantity index number

iii) Fisher's quantity index number and

Commodity	1989		1990	
	Price	Quantity	Price	Quantity
A	13	3	40	5
B	15	2	20	4
C	10	6	30	3
D	6	5	12	10

Q.4.a) Differentiate between absolute and Relative measures of variation.

b) Find the seventh Decile and twenty seventh Percentile for the following data:

Class intervals	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Frequency	3	12	29	47	19	12	5

c) Prepare a frequency table for the following data taking class-intervals of Exclusive type and a class interval of 3 units beginning with first class interval upper class boundary as 11.

15 17 23 14 13 19 15 17 15 12 16 18
21 15 20 12 09 14 17 16 15 13 22 20

Which class-interval has the highest frequency?

.OR.

Q.IV.x) What is Dispersion? What are the different measures of Dispersion?

y) If n = 10, $\sum x = 120$, $\sum x^2 = 1530$, with usual notations find the coefficient of variation.

z) Prepare a frequency distribution table for the following discrete data. Take class mark as 52 for the first class interval

52	59	70	71	57	61	55	72	60	66
54	58	65	70	73	69	68	72	73	68

Also write down relative and percentage frequency.

Q.5.a) What are the methods use for estimation of trend values in time series?

b) Find Quartile based Coefficient of Skewness for a frequency table given below. Median is known to be 39

Class interval	5-15	15-25	25-35	35-45	45-55	55-55
Frequency	2	5	12	15	12	4

c) Compute the cost of living index number by family budget method.

Group	Weight	Index
Food	20	320
Clothing	15	140
Fuel and lighting	1	270
House Rent	22	160
Miscellaneous	25	210

.OR.

Q.V.x) Write short note on "Seasonal Component" of time series.

y) Find appropriate coefficient of skewness from the following figures:

Wages (in Rs.)	100-150	150-200	200-250	250-300	300-350	350 and above
No. of workers	8	16	30	45	15	6

Median for the distribution is 256.67

z) Splice the following two index number series:

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998
Series A	100	120	140	165	180				
Series B					100	103	110	107	115

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