

The CES College of Arts and Commerce Councilin Salcote Goa
SYBCOM III Semester End Examination, October 2018
Statistical Techniques (Old Course)

Marks: 80

Duration: 2hrs

Date: 27/10/2018

Time: 2.00 to 4.00 p.m.

Instructions: 1) Attempt all questions.

2) Figure to the right indicates full marks.

3) Use of non-programmable calculator is allowed.

4) Log tables and graph papers will be supplied on request.

Q1: Attempt the following:

a) Explain the function of Statistics. (3mks)

b) Consider the following data about weight (in kg) of 25 workers: (6mks)

67.2; 54.3; 72.3; 49.8; 58.3; 63.8; 77.6; 82.3; 55.9; 60.0; 69.3; 49.1; 54.8; 66.8; 72.3; 77.3; 74.2;
67.1; 71.1; 55.8; 48.9; 53.2; 55.9; 60.3; 72.3

Prepare frequency table. Also prepare frequency table and percentage frequency table. (7mks)

c) Consider the following data:

C.I	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
F	8	10	12	11	14	8	4	2

Find mean and median.

OR

Q1: Attempt the following:

x) Define Statistics. (3mks)

y) Consider the following data: (6mks)

x	20-40	40-60	60-80	80-100	100-120	120-140	140-160
f	10	21	34	45	30	18	8

Draw frequency polygon. (7mks)

z) Find mode for the following data:

C.I	45-50	50-55	55-60	60-65	65-70	70-75	75-80
Freq	10	15	26	21	18	10	4

Q2: Attempt the following:

a) Bring out the difference between Primary Data and Secondary Data. (3mks)

b) Find the quartile deviation for the following data: (6mks)

C.I	20-30	30-40	40-50	50-60	60-70	70-80
Freq	8	10	15	20	11	7

c) Consider:

Year	2010	2011	2012	2013	2014	2015	2016
Price	10	15	21	34	33	40	47

Find the price index number for all the years with base 2012. (7mks)

OR

Q11: Attempt the following:

x) Distinguish between inclusive type and exclusive type of class intervals. (3mks)

y) Consider the following data: (6mks)

C.I	0-10	10-20	20-30	30-40	40-50	50-60
F	10	8	14	18	13	6

Find the Harmonic mean. (7mks)

z) Consider:

Commodity	Price		Weight
	Base Year	Current Year	
A	10	14	10
B	20	25	12
C	8	12	8
D	15	15	6

Find 1) Weighted Average of Price Relative.

2) Weighted Aggregative Price Index number.

Q3: Attempt the following:

a) Explain sub-divided bar diagram.

b) Consider the following data:

Year	2010	2011	2012	2013	2014	2015	2016	2017
Sale	12	15	20	22	25	23	28	26

(Rs. In Crores)

Find the trend by the method of semi-averages.

c) Find the coefficient of mean deviation from mode for the following:

C.I	30-40	40-50	50-60	60-70	70-80	80-90
F	12	18	25	17	7	2

OR

QIII: Attempt the following:

x) What is the need of diagrammatic representation of data.

y) Fit a trend method of three yearly moving averages for the following data:

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Prod	20	26	24	32	38	29	36	42	40

(In tons)

z) Consider the following data:

x	0-10	10-20	20-30	30-40	40-50	50-60	60-70
f	11	18	20	25	20	14	10

Find Coefficient of Quartile Deviation.

Q4: Attempt the following:

a) Explain 1) Frequency Polygon. 2) Splicing and 3) Seasonal Trend.

b) Find the mean deviation from median for the following data:

C.I	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Freq	4	10	18	20	13	11	7

c) Consider the following:

Year	2013	2014	2015	2016	2017
Sale	20	24	30	33	40

(Rs. In Crores)

Fit a line of best fit by method of least square and hence estimate sale in 2018.

OR

QIV: Attempt the following:

x) Explain 1) Cumulative Frequency. 2) Deflating and 3) Secular Trend.

y) Find the mean deviation from mode for the following data:

C.I	20-30	30-40	40-50	50-60	60-70	70-80	80-90
F	8	12	16	20	10	5	3

z) Fit a second degree trend curve for the following:

Year	2012	2013	2014	2015	2016	2017
Sale	8	10	13	12	15	20

(In 000's)

Also estimate the sale in 2018.

Q5: Attempt the following:

a) Define Continuous variate.

b) Consider the following data:

x	20-40	40-60	60-80	80-100	100-120
f	7	10	16	10	5

Find Karl Pearsons Coefficient of Skewness.

c) Consider the following data:

Commodity	Price		Quantity Consumed	
	Base Year	Current Year	Base Year	Current Year
A	8	10	3	5
B	20	25	4	8
C	10	12	2	2
D	6	9	10	12

Find cost of living index number.

OR

QV: Attempt the following:

x) Explain 1) Parameter. 2) Statistises. (3mks)

y) Consider the following data: (6mks)

C.I	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
No of Workers	2	8	15	22	17	10	7	4

Find Bowleys Coefficient of Skewness.

z) Find fishers price index number for the following data: (7mks)

Commodity	Base Year		Current Year	
	Base Year	Quantity	Base Year	Quantity
A	6	2	10	6
B	15	14	18	15
C	10	20	13	25
D	17	30	21	30
E	8	10	6	12

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