

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

B.Voc DEGREE EXAMINATION DECEMBER 2019
(First Semester)

Branch - BANKING, STOCK AND INSURANCE

BUSINESS STATISTICS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks!)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- 1 Graphs of frequency distributions are called _____.
(i) One dimensional diagrams (ii) Cartograms
(iii) Histograms (iv) Cubes
- 2 In chronological classification data are classified on the basis of
(i) Attributes (ii) Class interval (iii) Time (iv) Location
- 3 The relationship between Am, GM and HM is
(i) AM=GM=HM (ii) AM>GM> HM
(iii) HM> GM >AM (iv) GM> HM> AM
- 4 The sum of squares of deviation is least when measure Ned from
(i) Mode (ii) Median (iii) Mean (iv) Geometric mean
- 5 Limits for conflation coefficient are _____.
(i) — $1 < r < 1$ (ii) $0 < r < 1$
(iii) — $1 < r \leq 0$ (iv) — $-\infty < r < \infty$
- 6 If ltd regression coefficient of x cn y and Yon x are -0.4 and -0.9 respectively fund r).
(i) 0.6 (ii) 0.36 (iii) 0.4 (iv) -0.6
- 7 Ratio to trend method is used to estimate _____ in a time series.
(i) Seasonal indices (ii) Trend
(iii) Random valuation (iv) Cyclic venation
- 8 Trend cannot be
(i) leman (ii) Non lineman (iii) In a short duration (iv) None of these
- 9 The best average in construction of index numbers.
(i) Arithmetic mean (ii) Geometric mean
(iii) Med ran (iv) Mode
- 10 Name the two tests satisfied by a good index.
(i) Time lever Sal test factor reversal test (ii) Unit test, circular test
(iii) Time reversal test, unit test (iv) Factor lever Sal test, unit test

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 7 = 35)

- 11 a Explain the different types of classification of data.
OR
b Draw less than ogive curve and more than ogives from the data given below.
Also find its median

Profit (Lakhs)	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
No of cos	6	8	12	18	25	16	8	5	2

- 12 a Calculate mean, median mode for the following data.
61, 62, 63, 61, 63, 64, 60, 65, 63, 64, 64, 66, 64
OR
b Compute quartile deviation and its coefficient from t le following data.

Marks	10	20	30	40	50	60
No of students	4	7	15	8	7	2

13 a Two regression equations are : $3x+2t-26=0$; $6x+y-31=0$. Find the mean values of x and y also calculate 'IT.

OR

b Calculate Karl Pearson's coefficient of correlation from the following data.

Marks in Accountancy	48	35	17	23	47
Marks in statistics	45	20	40	25	45

14 a Construct 5 yearly moving average for the following data.

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
No.of students	332	317	357	392	402	405	410	427	405	438

OR

b Fit a straight line trend for the following series and show the trend line on a graph

Year	2001	2002	2003	2004	2005	2006	2007
Production	60	72	75	65	80	85	95

15 a The following are the group index numbers and the group weights of an average working class family's budget, construct the cost of living index number.

Group	Food	Clothing	Fuel & lighting	House cent	Misc
Index no	330	208	200	162	180
Weight	50	10	12	12	16

OR

b Calculate the chain base index numbers from the average price of following three commodities.

Commodity	2007	2008	2009	2010	2011
Wheat	4	6	8	10	12
Rice	16	20	24	30	36
Sugar	8	10	16	20	24

SECTION - C (30 Marks!)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 Discuss the different sources of collecting primary data.

17 Calculate mean median and standard deviation from the following data.

Wages (Rs.'000)	0-10	10-20	20-30	30-40	40-50	50-60
No of workers	12	17	23	39	16	3

18 Compute spearman's rank conflation for the following.:

Candidate	1	2	3	4	5	6	7	8
Judge x	20	22	28	23	30	30	23	24
Judge Y	28	24	24	25	26	27	32	30

19 Apply the method of link relatives to calculate seasonal indices.

Quarters	2007	2008	2009	2010
I	6.0	5.4	6.8	7.2
I	6.5	7.9	6.5	5.8
III	7.8	8.4	9.3	7.5
IV	8.7	7.3	6.4	8.5

20 Calculate price index numbers from the following data by i) Laspeyer's method ii) Paasche's method and iii) Fisher's Method.

Commodity	Base Year Price	Quantity	Current year Expenditure	Quantity
A	6	50	560	56
B	2	100	240	120
C	4	60	360	60
D	10	30	288	24
E	8	40	432	36