

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – BANKING STOCK AND INSURANCE

BUSINESS STATISTICS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Histogram is
 - (i) One dimensional diagram
 - (ii) two dimensional diagram
 - (iii) Three dimensional diagram
 - (iv) None
2. The A.M of two numbers is 6.5 and their G.M is 6. The two numbers are:
 - (i) 9, 6
 - (ii) 9, 5
 - (iii) 7, 6
 - (iv) 4, 9
3. Regression coefficient is independent of :
 - (i) Origin
 - (ii) Scale
 - (iii) Both i) and ii)
 - (iv) Neither (i) nor (ii)
4. Trend is a time series means:
 - (i) Long-term regular movement
 - (ii) Short-term regular movement
 - (iii) Both (i) and (ii)
 - (iv) Neither a) nor b)
5. The following excel function is used to find the mean of a number of items:
 - (i) =Find Average()
 - (ii) =sum()
 - (iii) =Mean()
 - (iv) =Average ()

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a) Explain about diagrams and graphs.
(OR)
b) State the applications of Statistics in Business.
7. a) Outline the merits and demerits of Arithmetic mean.
(OR)
b) State the merits and demerits of Standard deviation.
8. a) Explain interpretation of Spearman's rank correlation coefficient.
(OR)
b) Narrate the regression equations.
9. a) Describe the least square method in time series.
(OR)
b) Explain cost of living Index numbers.
10. a) How do you find arithmetic mean, median and mode in Excel?
(OR)
b) How do you find quartile deviation, variance and standard deviation in Excel?

SECTION - C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11.a) The cropping pattern of Tamil Nadu in 3 different years was as follows.

Crops	Area		
	2002	2003	2004
Cereals	3600	3650	3950
Oilseeds	1000	1150	1100
Pulses	400	450	460
Cotton	200	230	240
Others	800	820	820

Draw multiple bar diagram, Component bar diagram and Percentage bar diagram.
(OR)

11.b) The table given below shows the marks obtained by 80 students in science. Construct (i) less than ogive (ii) more than ogive.

Marks	No. of Students
0-10	3
10-20	8
20-30	17
30-40	29
40-50	15
50-60	6
60-70	2

12.a) A survey on the heights (in cm) of 50 girls of class X was conducted at a school and the following data were obtained:

Height (in cm)	120-130	130-140	140-150	150-160	160-170	Total
Number of girls	2	8	12	20	8	50

Find the mode and median of the above data.

12.b) Following data shows the number of runs made by Sachin and Sourabh in different innings. Find out who is a good scorer and who is more consistent player?

Sachin	92	17	83	56	72	76	64	45	40	32
Sourabh	28	70	31	00	59	108	82	14	3	95

13.a) The following data represents the number of hours of 12 different students watched television during the weekend and the scores of each student who took a test the following Monday.

Hours(x)	0	1	2	3	3	5	5	5	6	7	7	10
Test Score(y)	96	85	82	74	95	68	76	84	58	65	75	50

Calculate the correlation coefficient.

(OR)

13.b) The following data gives the experience of machine operators and their performance ratings as given by the number of good parts turned out per 50 pieces.

Operators	1	2	3	4	5	6	7	8
Experience(X)	8	11	7	10	12	5	4	6
Ratings(Y)	11	30	25	44	38	25	20	27

Obtain the regression equations and estimate the ratings corresponding to the experience, $x = 15$.

14.a) Below are given the figures of production (in thousand quintals) of a sugar factory:

Year	:	2001	2002	2003	2004	2005	2006	2007
Production (in '000 qtls.):		80	90	92	83	94	99	92

(i) Fit a straight line trend to these figures.

(ii) Plot these figures on a graph and show the trend line.

(OR)

14.b) Compute price index numbers for the following data by

(i) Laspeyre's method

(ii) Paasche's method

(iii) Fisher's ideal index method

Year	Commodity A		Commodity B		Commodity C	
	Price	Quantity	Price	Quantity	Price	Quantity
1980	4	50	33	10	2	5
1985	10	45	6	8	3	4

15.a) Explain how to calculate correlation and regression in MS-Excel.

(OR)

15.b) Describe the FORECAST TREND, SLOPE and INTERCEPT functions in MS-Excel.