## 2024 of our more (p)

(6th Semester)

## COMMERCE

Paper: BC-603

(Business Statistics)

Full Marks: 70

Pass Marks: 45%

Time: 3 hours

( PART : B—DESCRIPTIVE )

( Marks: 45)

The figures in the margin indicate full marks for the questions

1. (a) Define statistics. Explain the characteristics of statistics. 2+7=9

pro index number by

(b) What do you mean by primary data?

Discuss the various methods of collecting primary data.

2+7=9

(2)

2. (a) From the following data, calculate mean marks of the students:

	DESIGNATION AND ADDRESS OF THE PARTY OF THE
Marks	No. of students
0-10	MMOO 5
10-20	10
20–30	I : reque25
30-40	30
40-50	20
50-60	10
Pass M	Or 07:23/10

(b) Calculate Karl Pearson's coefficient of correlation from the following data:

 Price (in ₹)
 : 4 5 7 10 4

 Supply (in unit)
 : 10 12 13 15 20

 Also interpret the result.

3. (a) What is an index number? Explain the various types of index number. 2+7=9

for the questions

characteristica of statistics.

- (b) Construct price index number by applying—
  - (i) Laspeyres' method;
    - (ii) Paasche's method;

- (iii) Fisher's method;
- (iv) Dorbish and Bowley method;
- (v) Marshall-Edgeworth method:

solving it are L L and L respectively. 2022 2023 Commodity Quantity Price Price Quantity + + 8 4 6 2 A 5 B 5 10 6 5 10 C 4 14 2 D 2 19 13

**4.** (a) Discuss the various components of time series.

Or

(b) From the following data, calculate the trend values by using the method of least square and estimate the sales from the year 2022:

 Year
 : 2016
 2017
 2018
 2019
 2020

 Sales (in '000)
 : 70
 100
 120
 130
 150

5. (a) Define sample method. Explain the essentials of sampling. 2+7=9

(Continued)

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(Turn Over)

9

9

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farks: 45%

2. (a) From the follow Orthstrade Hallile meen

(b) A problem in statistics is given to three students A, B and C. Their chances of solving it are  $\frac{1}{2}$ ,  $\frac{1}{3}$  and  $\frac{1}{4}$ , respectively. What is the probability that the problem will be solved?

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correlation from the following data:

\* (a) Discuss the various commonents of time series.

Or

thuses est terquetni osiA

(b) From the following data, calculate the

trend values by using the method of

: 2016 2017 2018 2019 2019 :

5. (a) Define sample method Explain the

essentialsboff seamphingsas (ii)

(b) The cheapest met 2 0 2 olecting primary data

(6th Semester)

COMMERCE

Paper: BC-603

( Business Statistics )

(iv) information from correspondents

( PART : A—OBJECTIVE )

When the val ( 22: sham ) ables move in the same direction, the correlation is seid to be

The figures in the margin indicate full marks for the questions

## Answer all questions

- 1. Choose the correct answer and place its code in the brackets provided:
  - (a) The process of arranging data in group of related facts of different classes is called
    - (i) tabulation
    - (ii) classification
    - (iii) frequency make method
    - (iv) distribution distribution distribution

al convenience sampling

multi-stage sampling

(i) independent event

(i) Blaise Pascal

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(iii) quota sampling

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(b)	The is	cheapest method of collecting primary data telephone interview
	(ii)	enumerator OFF MMOO
	(iii)	mailed questionnaire
	(iv)	information from correspondents  ( 2010e13212 2000121111 [ ]
		PART : A-OBJECTIVE )

When the values of two variables mov same direction, the correlation is said to be (i) positive mulicate full margin indicate full moving to

(a) The process of arranging data in group of related

prackets provided:

- (i) tabulation

(ii) classification

(iii) frequency

(iv) distribution

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- (ii) negative of the last towards
- (iii) No correlation 1. Choose the correct answer and pla
- (iv) None of the above 1×10=10

facts of different classes is co (d) Standard deviation is the measure of

- mean
- median
- mode (iii)
- (iv) dispersion

(e) Index	numbers are	expressed	in	(WhinThe
is calledo	moitsiugag la	of the sunits	labledist	leve 1

- (i) square
- (iii) metre
- (iv) percentage
- The index number which is used to measure the purchasing power of money is

prevents the occurrence of all the others is called

- (i) price index
- (ii) quantity index
- (iii) cost of living index
- (iv) deflating ve evision ve with the (iii)
- The most popular and widely used method for the measurement of trend line in time series is
  - graphic method
  - semi-average method all samodT (a)
  - (iii) moving average method A.A.
  - (iv) method of least square

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(h)	The avai	sample lable list	which of the w	is nits	obtained of populat	from	readily called
	(i)	convenie	ence sai	mpl	ing	2000	(H)

(ii) judgement sampling

(iii) quota sampling

(iv) multi-stage sampling

(i) The occurrence of any of the events which prevents the occurrence of all the others is called

(iii) metre

(ii) quantity index

(i) graphic method

- (i) independent event
- (ii) dependent event
- (iii) mutually exclusive event to teas (iii)
- (iv) not mutually exclusive event

(j) The theory of probability was developed by

- (i) Blaise Pascal
- (ii) Thomas Bayes (iii)
- (iii) R. A. Fisherdiam agazava gnivom (iii)
- (iv) Karl Pearson supe tessi to bodtem [ui)

2. State whether the following statements are True (T) or False (F) by putting a Tick (I) mark: 1×5=5

(a) Median and mode are called positional averages.

(T/F)

(b) Index numbers are specialized averages.

(T/F)

(c) The sum of seasonal indices (using additive model) is equal to zero.

(T/F)

(d) Attribute is a measurable characteristic.

(T/F)

(e) Probability ranges from 0 to 2.

(T/F)

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3. Write short notes on any five of the following: 2×5=10 (a) Secondary data

mode mare mealled up positional averages.

(iii) quota samplina

Abla Index numbers are specialized averages ar ( 7 pregents the occurrence of all the others is called

(i) independent event

(c) The sum of seasonal Halices hasing additive model) is equal to zero.

(d) Attribute is a measurable characteristical

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(e) Probability ranges from 0 to 2 ... A. J. (iii)

(b) Properties of median

(c) Lorenz curve

(c) Lorenz curve

any fivenchem to escrepci (d) Splicing

(d) Splicing

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(e) Business cycle

(f) Uses of index number bodism enemal (p)

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(g) Census method

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