

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION MAY 2022
(Second Semester)

Branch – COMMERCE (PROFESSIONAL ACCOUNTING)

QUANTITATIVE TECHNIQUES

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Statistics is liable to be
 - (i) Misused
 - (ii) Misplaced
 - (iii) Miss understood
 - (iv) Little change
- 2 The formula for Quartile deviation
 - (i) $Q.D = \frac{Q_3 - Q_1}{2}$
 - (ii) $Q.D = \frac{Q_1 - Q_3}{2}$
 - (iii) $Q.D = \frac{Q_3 + Q_1}{2}$
 - (iv) $Q.D = \frac{Q_3 - Q_1}{4}$
- 3 As a measure of intensity of linear relationship between two variables is called
 - (i) Regression
 - (ii) Correlation
 - (iii) Rank correlation
 - (iv) Error term
- 4 Index numbers are known as
 - (i) Mathematical parameters
 - (ii) Physical parameters
 - (iii) Economic parameters
 - (iv) Chemical parameters
- 5 The numerical evaluation of a chance factor of an experiment is called
 - (i) Experiment
 - (ii) Event
 - (iii) Trial
 - (iv) Probability

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Write the Limitations of statistics.
OR
b Write a note on Census method.
- 7 a Find mean and median for the following data. 47 50 59 65 68 53 71 74 65 68.
OR
b Obtain the quartile deviation from the following data 391, 384, 591, 407, 672, 522, 777, 733, 1490, 2488.
- 8 a What is scatter diagram and give an example.
OR
b Two ladies were asked to rank 7 different types of lipsticks. The ranks given by them are as follows apply spearman rank correlation and give your opinion.

Lipsticks	A	B	C	D	E	F	G
Meena	2	1	4	3	5	7	6
Lakshmi	1	3	2	4	5	6	7

Cont...

- 9 a From the following data, construct simple of average index for 1999 taking 1998 as base.

Commodities	Price in 1998	Price in 1999
A	50	70
B	40	60
C	80	90
D	110	120
E	20	20

OR

- b Fit a trend equations by the method of least squares.

Year	1979	1980	1981	1982	1983
Sales	100	120	140	160	180

- 10 a (i) From the word "Victory" are arranged at random, what is the probability that there exactly one letter between V and C.
 (ii) From a pack of well shuffled playing cards, one card is drawn at random. What is the probability that is a king or a spades?

OR

- b (i) List the characteristics of Normal distribution.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Briefly explain the concept of Primary and Secondary data.

OR

- b Explain the types of diagrams.

- 12 a Find the mean, median and mode for the following data.

C.I	0- 20	20- 40	40 - 60	60- 80	80 - 100
F	8	12	30	20	10

OR

- b Illustrate the merits and demerits of mean, median and mode.

- 13 a Calculate the coefficient of rank correlation from the following data:

X	:68	64	75	50	64	80	75	40	55	64
Y	:62	58	68	45	81	60	68	48	50	70

OR

- b What are the properties of Regression.

- 14 a From the following data calculate the price index numbers for 2005 with 1995 as base by (i) Laspeyre's (ii) Paasche's (iii) Fisher's

Commodities	1995		2005	
	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

Cont...

OR

b Fit a straight line trend to the following data by the method of 3yearly moving average.

Year	1995	1997	1998	1999	2000	2001	2004	2005	2006	2007
Production	77	88	94	85	91	98	90	87	92	95

15 a State and prove the addition and multiplication theorem on probability. When the two events are not necessarily mutually exclusive and independent events.

OR

b In a street of 200 families, 40 families purchase the Hindu newspaper. Among the families a sample of 10 families are selected, find the probability that

- (i) Only one family purchase the newspaper.
- (ii) No family Purchasing.
- (iii) Not more than one family purchase it.

Z-Z-Z

END