

## ST. MARY'S P.G. COLLEGE, VIDISHA

## SUPPLEMENTARY COPY

Date \_\_\_\_\_ Sub \_\_\_\_\_ Exam \_\_\_\_\_ T. Sign. \_\_\_\_\_

B.B.A. I<sup>ST</sup> year

Business Statistics

Important Question

① Objective Type Questions

(1) Statistics is a science of counting by whom this definition is given

(a) Boddington (b) Bowley (c) Parsetto (d) Croxton and Cowden

(2) Maximum value of Correlation is:

(a) 2 (b) 1.5 (c) 1 (d) 0

(3) Spearman's method is the method of calculating coefficient of correlation by.

(a) Irvin fischer (b) Charles Spearman  
(c) Lorenz (d) Karl Pearson.

(4) Which one of the following is a relative measure of dispersion.

(a) Standard deviation (b) Variance (c) Coefficient of variation  
(d) None of the above.

(5) The average for the construction of index number is  
 (a) Median (b) Geometric mean (c) Mode  
 (d) Arithmetic mean.

(6) An ideal index number satisfies the following Test.  
 (a) Unit Test (b) Time reversal Test  
 (c) Factor reversal Test (d) All above.

(7) The formula of fisher's ideal index number is .

(a)  $P_{01} = \frac{E_{P190}}{E_{P090}} \times 100$       (b)  $P_{01} = \frac{E_{P191}}{E_{P091}} \times 100$   
 (c)  $P_{01} = \frac{E_{P1}(90+91)}{E_{P0}(90+91)} \times 100$       (d)  $P_{01} = \sqrt{\frac{E_{P190}}{E_{P090}} + \frac{E_{P191}}{E_{P091}}} \times 100$

(8) The measure based on all the values of variable is  
 (a) Range (b) Standard deviation  
 (c) Quartile deviation (d) None of these.

(9) if  $Q_1 = 33$ ,  $Q_3 = 24$ , then the value of S.D with the empirical relation will be.  
 (a) 4.5 (b) 6.75 (c) 3 (d) 3.6

(10) if  $N = 10$ ,  $\Sigma X = 60$ ,  $\Sigma X^2 = 1000$ , then standard will be.  
 (a) 8 (b) 12 (c) 6 (d) 100

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SHORT ANSWER QUESTION

- 1 - Explain any two importance of statistics.
- 2 - What do you mean by statistical investigation.
- 3 - What is a questionnaire.
- 4 - What do you understand by Random Sampling.
- 5 - Explain cumulative frequency distribution.
- 6 - Write short notes on geometric mean and Harmonic Mean.
- 7 - Write a short note on Spearman's rank correlation method.
- 8 - What is Karl Pearson's Coefficient of Correlation.
- 9 - Distinguish between fixed base method and chain base method.
- 10 - What is Index Number. How are they constructed.

◦ LONG ANSWER QUESTION ◦

from the following data find median.

- 1 - Wages more than 20, 30, 40, 50, 60, 70, 80  
No. of persons 80, 74, 64, 48, 30, 18, 0
- 2 - Calculate Median and Mean from the following set  
Marks more than 0, 10, 20, 30, 40, 50, 60, 70, 80  
No. of Students 240, 215, 200, 180, 165, 145, 115, 50, 0

4 -

3 - find out mean, Median, and mode from the following series.

Mid-value -	5	15	25	35	45	55
Frequency	4	6	10	7	3	2

4 - find Harmonic Mean from the following data.

6, 13.4, 18, 24, 3.83, 152, 0.034, 0.250, 35.3, 5.48.

5 - Find Karl Pearson and Bowley's Coefficient of Skewness for the following distribution.

year (less than) -	10	20	30	40	50	60
No of persons -	15	32	51	70	97	109

6 - Find the seasonal indices from the following data by Ratio to moving Average method.

quarters	1994	1995	1996	1997	1998
I	40	42	41	45	44
II	35	37	35	36	38
III	38	39	38	36	38
IV	40	38	42	41	42

7 - Find the coefficient of Correlation of  $x$  and  $y$

$x$	50	53	41	39	43	46	43	45	41	47	45	44
$y$	11	27	31	42	30	28	28	20	19	20	32	30

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8 - from the following data calculate Spearman's Rank coefficient of Correlation.

Serial Number	1	2	3	4	5	6	7	8	9	10
Rank difference	-2	-4	-1	+3	+2	0	X	+3	+3	-2

9 - Find Fisher's index number from the data given below.

Commodity	Base year		Current year	
	Price	Qty	Price	Qty
A	3	50	5	56
B	1	100	1	120
C	2	60	3	60
D	5	30	6	24
E	4	40	6	36

10 - from the following data construct index number for each year by taking the price (in Rs) of a commodity A with 1997 as base.

year	1995	1996	1997	1998	1999	2000	2001
price	108	134	156	112	144	204	196

Prof. Ramanand Mishra  
Dept. of Commerce & Management