

Roll No. _____

BUSINESS STATISTICS
(Commerce Group)

Time: 15 Minutes

Intermediate Part-II, Class 12th (1st A 424 - III)

PAPER: II

OBJECTIVE

Code: 8645

GUT-24

Marks: 10

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two more circles will result in zero mark in that question.

- 1- 1- The mean and median of any two values are always
(A) mean > median (B) mean = median (C) mean < median (D) mean \neq median
- 2- In a statistical table, column captions are called _____
(A) box head (B) stub (C) body (D) title
- 3- Which price relative is used in fixed base method
(A) $\frac{P_n}{P_0} \times 100$ (B) $\frac{P_n}{P_{n-1}} \times 100$ (C) $\frac{P_{n-1}}{P_n} \times 100$ (D) $\frac{P_0}{P_{n-1}} \times 100$
- 4- Which of the following cannot be the probability of an event
(A) 1.75 (B) zero (C) 0.78 (D) 0.82
- 5- An index number calculated for single variable is called
(A) composite index number (B) price index number
(C) quantity index number (D) simple index number
- 6- Height of a plant is _____
(A) qualitative variable (B) discrete variable
(C) continuous variable (D) attribute
- 7- The grouped data is called _____
(A) primary data (B) secondary data (C) raw data (D) discrete data
- 8- Two events 'A' and 'B' are said to be mutually exclusive if _____
(A) $P(A \cap B) = 1$ (B) $P(A \cap B) = 0$ (C) $P(A \cup B) = 0$ (D) $P(A \cup B) = 1$
- 9- Average affected by extreme large values is
(A) arithmetic mean (B) geometric mean (C) median (D) mode
- 10- $\sum (y - \bar{y})^2 =$ _____
(A) maximum (B) least (C) zero (D) 1

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Time: 1:45 Hours

SUBJECTIVE *GVJ-24*

Marks: 40

Note: Section I is compulsory. Attempt any Two (2) questions from Section II.

SECTION - I

2. Write short answers to any SIX (6) questions:

(2 × 6 = 12)

- What do you mean by data?
- Explain the difference between population and sample.
- Define variable with example.
- What is classification?
- Define the class frequency.
- Differentiate between the row caption and stub.
- Write down two properties of random experiments.
- What is mathematical probability?
- Define the sample points.

3. Write short answers to any SIX (6) questions:

(2 × 6 = 12)

- Give two merits of arithmetic mean.
- If $x = 50 + 10u$, $\sum fu = 400$, $\sum f = 40$. Find \bar{x} .
- Define median.
- Write down the empirical relationship between mean, median and mode.
- Determine median if mean = 25, mode = 40.
- Given that $n_1 = 10$, $\bar{x}_1 = 25$, $n_2 = 15$, $\bar{x}_2 = 20$. Find combined mean.
- Explain weighted index number.
- Compute Paasche's index number if $\sum p_n q_n = 2560$, $\sum p_o q_n = 2173$
- Differentiate between price relatives and link relatives.

(Turn Over)

SECTION - II

4 - (a) From the following frequency distribution, compute class marks, cumulative frequencies, relative frequencies and percentage frequencies:

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Classes	10-20	20-30	30-40	40-50
Frequency	5	15	20	10

(b) Draw a histogram on the basis of following data:

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Wages	1-5	6-10	11-15	16-20	21-25
No. of workers	15	25	30	20	10

5 - (a) Calculate arithmetic mean:

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Groups:	1.5-2	2-2.5	2.5-3	3-3.5	3.5-4	4-4.5
f:	3	7	10	15	9	6

(b) Calculate mode from the following data:

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Hourly wages:	4-6	7-9	10-12	13-15	16-18	19-21
f:	13	85	105	59	31	7

6 - (a) Compute the Index Number using simple aggregative method with 2015 as base year.

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Years	Commodities				
	A	B	C	D	E
2015	100	90	15	30	105
2016	115	100	16	32	108
2017	120	101	17	40	120
2018	130	112	21	45	130
2019	145	140	30	42	135

(b) Two dice are rolled together. Find the probability that:

- The sum of two dots is 6.
- The sum of two dots is 9.

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