Examination Paper STATISTICS
Second Year (Commerce)

Total Duration: 40 min **Total Marks: 25**

SECTION "A" (M.C.Qs)

Q.1) choose the correct answer for each from the given options: (25 marks)

1. The data which is not collected originally but is gathered from external sources like newspapers, T.V channels, books etc. is termed as:

(a) Grouped data
(b) Primary data
(c) Secondary data
(d) Ungrouped data.

2. Age of a soldier is an example of:

(a) Primary data
(b) Secondary data
(c) Discrete data
(d) Continuous data

3. Total number of students of a college is an example of:

(a) Sample
(b) Data
(c) Population
(d) Statistic.

4. Height, weight, time, distance all are examples of:

(a) Qualitative data
(b) Continuous data
(c) Discrete data
(d) Grouped data

5. Tally bars (marks) in a tally bar sheet help to determine:

(a) Class width
(b) Mid-point
(c) Class boundaries
(d) Frequency

6. The difference between maximum value and minimum value of data is termed as:

(a) Range
(b) Mid value
(c) Class boundaries
(d) Cumulative frequency

7. The average of the lower and upper limit of a class interval is termed as:
(a) Class boundaries
(b) Cumulative frequency
(c) Mid-point
(d) Relative frequency

8. The sum of all relative frequencies must be equal to:
(a) 1
(b) Infinity
(c) -1
(d) 0

9. The difference between upper class and lower-class boundaries of the same class are known as:
(a) Mid-point
(b) Cumulative frequency
(c) Size of class interval
(d) Relative frequencies

10. Components of a factor are represented in sectors through which one of the following:
(a) Pie diagram
(b) Simple bar diagram
(c) Multiple bar diagram
(d) Histogram

11. A frequency polygon may be drawn on:
a) Pie diagram
(b) Histogram
c) Bar diagram
(d) Frequency

12. For a pie diagram, the sum of all sector angles is:
(a) 180°
(b) 200°
(c) 270°
(d) 360°

13. Which one of the following is known as measures of central tendency?
(a) Mean

(b) Probability
(c) Index number
(d) None of these

14. The frequent repeated value of data is termed as:
a) Mean
(b) Median
c) Mode
(d) None of these

15. In which one of the following distribution Mean > Median > Mode:
(a) Symmetrical
(b) Positively skewed
(c) Negatively skewed
(d) None of these

16. The value of most middle item when these items are arranged according to their magnitude is termed as:
(a) Mode
(b) Mean
(c) Median
(d) None of these

17. In symmetrical distribution, the mean, median and mode are always:
(a) Zero
(b) Negative
(c) Equal
(d) None of these

18. A statistical measure designed to show changes in variables of a group of related variables with respect to time
(a) Graphs
(b) Tables
(c) Index number
(d) None of these

19. Index numbers are expressed in:
(a) Percentages
(b) Kilograms
(c) Pounds
(d) Liters

20. One of the following index number is also termed as base year index number. Point out that one:
(a) Paasche's index number
(b) Fisher's index number
(c) Laspeyre's index number
(d) None of these.

21. Empty set is also known as:
(a) Equal set
(b) Null set
(c) Units set
(d) Universal set.

22. All possible outcomes of an experiment are termed as:
(a) Favorable event
(b) Unfavorable event
(c) Sample space
(d) None of these

23. tossing a coin or throwing a die are termed as:
(a) Favorable event
(b) Unfavorable event
(c) Sample space
(d) None of these

24. What is the number of total king cards in an ordinary deck of 52 playing cards?
(a) 4
(b) 8
(c) 3
(d) 5

25. A certain ordered arrangement of a group of items is called:
(a) Factorial
(b) Union
(c) Permutation
(d) Combination.

SECTION 'B'

(SHORT- ANSWER QUESTION)

Attempt any **THREE** Questions; all question carries equal marks. **Marks: 15.**

Q.no.2) Define discrete and continuous variables. Write two examples for each.
or Quantitative variable and qualitative variable.

Q.no.3) Draw a pie diagram in your answer script of the following data:

Category	A	B	C	D	E	F
Frequency	9	12	57	24	10	8

Q.no.4) The mean of 25 values is 56. If a value 82 is included in the data, then find the mean of 26 values.

Q.no.5) The following data give the record of wages (in Rs.) of 30 workers in a factory:

127	129	131	122	124	112	114	137	114	126
129	124	126	134	128	121	129	135	118	132
127	119	133	131	125	134	117	116	131	134.

Prepare a fequency distribution, taking class- intervals as 110 – 114, 115 – 119, 120 – 124, …….. etc.

Q.no.6) From a group of 8 boys and 4 girls, a group of 3 students is to be selected. How many combinations are possible if we select?

i) 2 boys and 1 girl. (ii) Boys only.

OR

In how many possible ways can the letter of the "STATISTICS' be arranged.

SECTION 'C'
Detailed-Answer Questions.

Attempt any **ONE** Question **Marks: 10.**

Q.no. 7) (a) Compute the mean, median and mode of the given frequency distribution.

Weight	16 – 20	21 – 25	26 – 30	31 – 35	36 – 40.	41 – 45
Frequency	4	6	8	14	8	6

(b) Three coins are tossed together:

Find: (i) The sample space.

(ii) The probability of getting at most 1 tail.

(iii) The probability of getting at least 2 tails.

Q.no.8) (a) For the following data: calculate weighted index number for the year 2021 using:

i) Laspeyre's price index numbers.

ii) Paasche's price index numbers.

iii) Fisher's price index numbers.

Commodity	2020		2021	
	Price	Quantity	Price	Quantity
Wheat	30	5	45	4
Sugar	120	4	150	3
Oil	42	10	60	8
Milk	225	12	310	7

(b) Two balanced dice are rolled together:

Find the:

i) Sample space.

ii) Probability of getting the same number of dots on both dices.

iii) The probability that sum of dots is at most 4.