



Register Number:

Date:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE – 27
PG (OPEN ELECTIVE) – III SEMESTER
SEMESTER EXAMINATION – DECEMBER 2022
STOE 9620: STATISTICAL METHODS

Time: 1 ½ hour

Max: 35 Marks

This Question Paper consists of **TWO** printed sides and **TWO** parts.

PART-A

I. ANSWER any THREE of the following.

3x3=9

1. Explain qualitative and quantitative data types.
2. What are the different scales of measurement?
3. What are skewness and kurtosis?
4. What is stratified sampling? Give example.
5. Explain the concept of parameter and statistic.

PART-B

II. ANSWER any TWO of the following.

2x13=26

6. A) State the differences between spearman's rank correlation and Karl Pearson's Correlation with its mathematical formula.
B) Find rank correlation for the following data.

Price of tea	88	90	95	70	60	75	50
Price of coffee	120	134	150	115	110	140	100

(6+7)

7. A) Calculate arithmetic mean for the following data.

Income Rs(100)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Number of persons	6	8	10	12	7	4	3

- B) Explain the steps involved in determining sample size.

(6+7)

8. A) Define Bernoulli distribution. Derive mean $E(X)$ and variance $V(X)$ for Bernoulli Distribution. [$V(X) = E(X^2) - E(X)^2$]

B) A pack consists of 20 rubber bands, containing 8 green rubber bands and 12 red Rubber bands. If 2 rubber bands are drawn without replacement, find the probability that both rubber bands drawn will be red.

(8+5)
