

Cutting, Overwriting, Erasing, Fluid painting and use of Lead Pencil will earn no marks.
 Write answer of the Question No.1 and 2 on this sheet and handover it to the supervisory staff of examination within first 35 minutes.

Time Allowed: 35 Minutes

(OBJECTIVE PART)

Max. Marks: 32

**Sign of
Supdt.**

1- a) Encircle the correct answer:

1x4

- i) Zero-Point is meaningless in case of
 - a) Nominal Scale
 - b) Internal Scale
 - c) Ordinal Scale
 - d) Radio Scale
- ii) Which one of the following is not a measure of Relative Dispersion?
 - a) Coefficient of Dispersion
 - b) Quartile Deviation
 - c) Coefficient of S.D
 - d) Coefficient of Variation
- iii) Which distribution of the following is not involved in inference?
 - a) Pop. Dist.
 - b) Sample dist.
 - c) Frequency dist.
 - d) Sampling distribution
- iv) Which one is different from others?
 - a) Laspeyr's P.I.No
 - b) Fisher's P.I.No
 - c) Volume I.Wo
 - d) Paache's P.I.No

b) Encircle true or false.

1x8

- i) An Outlier is an extreme point value that lies far away from the mean. **TRUE / FALSE**
- ii) Winsorized data set is obtained by replacing trimmed values by those next in the magnitude. **TRUE / FALSE**
- iii) The square root of variance is called S.D. **TRUE / FALSE**
- iv) The Z-Scores depend on the units used. **TRUE / FALSE**
- v) Two events are called mutually exclusive events if they have some basic outcomes. **TRUE / FALSE**
- vi) Total area under the normal curve is unity. **TRUE / FALSE**
- vii) t-distribution is a unimodel dist. **TRUE / FALSE**
- viii) The level of significance for the hypothesis test is called type-II error. **TRUE / FALSE**

c) Fill in the Blanks.

1x4

- i) 'r' is the _____ between the two regression coefficients.
- ii) GDP deflator = _____.
- iii) Permutation of like events = _____.
- iv) A five-number summing is also known as _____.

ii)

Differentiate between Primary and Secondary data.

iii)

Explain the difference between Histogram and Pie-Chart.

iv)

Explain the use of standard scores.

v)

Give Axiomatic Definition of Probability.

vi)

Explain permutation rule.

vii)

Define Regression.

viii)

Define Forecasting.

(Economics) Statistics for Economists

Attempt any **FOUR** Questions in all. Use of **calculators** and **tables** are **allowed**.

(Subjective Type)

- 3- a) i) Define DISCRETE VARIABLES. 5
 ii) RATIO SCALE OF MEASUREMENT.
 iii) CROSS-SECTION DATA.
 iv) INCLUSIVE METHOD OF CLASSIFICATION.
 v) COMPLEMENT OF AN EVENT.

- b) Calculate the G.M and H.M of the following data. 5

Size of Item	4.5	250.5	12.0	119.5	30.0	42.0	75.0	35.4
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- c) 7

Class Limits	2-4	5-7	8-10	11-13	14-16	17-19	20-22
Frequency	-	23	-	-	-	6	-
Relative Frequency	-	-	0.34	0.17	-	-	-
Cumulative Frequency	-	29	-	-	92	-	-

- 4- a) A textile worker in the city of Lahore spends Rs. 350 per month. The cost of living index for a particular month is 136. Using the following data find the amount spends on housing and clothing? 9

Item	Food	Clothing	Housing	Food & Light	Misc.
Expenditure	140	X	Y	56	63
Item Index	180	150	100	110	80

- b) What are uses and limitations of General Price Index Number? 8

- 5- a) The random variable has the following probability distribution 10

X	4	5	6	7
P(X=x)	0.2	0.4	0.3	0.1

Find mean and variance of distribution of mean from random sample of size 36 selected with replacement. Find the probability that the mean of 36 items will be less than 5.5

- b) A random sample of size 200 selected without replacement form a finite population of 1000 with standard deviation 1.28, showed mean equal to 68.6. Construct 97 % C.I for population mean. 7

- 6- a) Differentiate between regression and correlation. 5

- b) The member of a selection committee rank right persons according to their suitability for promotions as follows: 12

Persons	A	B	C	D	E	F	G	H
Member I	1	2.5	2.5	4	5	6	7	8
Member II	2	4	1	3	6	6	6	8

Calculate the coefficient of rank correlation

- 7- a) Four brands of light bulbs are being considered to use in a large manufacturing plant as shown below: 12

	A	B	C	D
Unacceptable	12	8	5	11
Acceptable	88	92	95	89
Total	100	100	100	100

At the .05 significance level, is there a difference in the quality of the bulbs?

- b) Explain the concept of limitations of Chi-Square. 5

- 8- a) Distinguish between coefficient of determination and standard Error of Estimate 5

- b) While conducting a global test, the ratio between Mean Squares of Regression and Mean Square of Error was found 10 at 0.05 level of significance. In which Mean-Square of Error was 2 and total was 140 with k = 5 and n = 26. Develop an ANOVA table? 5