(STATISTICS - 1st YEAR)

(1X17)

Q#1 Tick the Correct answer

1- Group data is
(a) Primmary (b) Secondary (iii) Raw data (iv) None of These.

2- The heading for different rows are called.
(a) Stub (b) Body (c) Source Note (d) Row Captions

3- The Sum of the deviations taken from arithmatic mean is
(a) Zero (b) one (c) Two (d) Three.

4- If $\bar{X} = 40$, Mode = 42 then the distribution is
(a) +ve Skewed (b) -ve Skewed (c) Symmetrical (d) ALL of These.

5- Geometric Mean is possible only for
(a) negative values (b) Positive values (c) imaginary values (d) decimal values

6- In a Symmetrical distribution
(a) $\beta_1 = 0$ (b) $\beta_1 = 3$, (c) $\beta_2 = 3$ (d) $\beta_2 > 3$

7- Second moment about mean is
(a) Zero (b) one (c) Variance (d) Standard deviation.

8- Range is
(a) Absolute measure (b) Relative measure (c) Percentage (D) Ratio

9- Simple index Number has/have involve Commodity/Commodities.
(a) one (b) Two (c) Three (d) Four.

10- In chain base method the base period is
(a) Fixed (b) changed (c) Constant (d) None of These

11- The Link Relative are not directly
(a) Related (b) Converted (c) Calculated (d) Compareable

12- The Probability of drawing one spade Card is
(a) 1/62 (b) 1/3 (c) 4/13 (d) 1/4

13- If 'A' and 'B' are independent then P(A ∩ B) is
(a) P(A) - P(B) (b) P(A) + P(B) (c) P(A/B) (d) P(A) . P(B)

~~On to~~

13- On tossing of 2 perfect Coins the Probability at least one head occurs is

(a) 1/2 (b)- 1/4 (c) - 3/4 (d) 1

14. Each digit 0, 1, 2, ---- 9 has Prob

(a) - 0.4 (b)- 0.2 (c)- 0.1 (d)- 0.3

15- The Prob. density function is represented by

(a) Smooth line (b). Smooth curve (c)- Smooth dots (d). Smooth Dashes.

16- The Parameters of Binomial distribution are

(a)- P and q (b)- q and n (c). n and p (d) n, P, q

17. On a Hyper Geometric distribution the trials are

(a) independent (b)- dependent (c). "a" and "b" both. (d)- None of these

(i) MUHAMMAD SALEEM AMJAD
Assistant Professor Govt College
Jampur

(ii) SANA ULLAH LECTURER
Govt College Rajanpur

Sana Ullah

STATISTICS - PART I

(SUBJECTIVE) (SECTION - I)

Q#2 write the short answers any Eight (8) questions of the following (8x2 = 16)

(i) Define Paramter and Statistics

(ii) Distinguish between Primmary and secondary data.

(iii) What is meant by measure of central tendency

iv) For a certain distribution if $\Sigma(x-15) = 5$, $\Sigma(x-18) = 0$, $\Sigma(x-21) = -21$ What is the value of A.M and why?

v) Describe the Properties of Good average.

vi) Give Two ~~merti~~ merits and demerits of Geometric mean

vii) Give the difference between weighted and un-weighted index numbers.

viii) What is an index number. Give any two (2) uses of index number.

ix) If $\Sigma P_n q_n = 530$, $\Sigma P_0 q_n = 470$ find current year weighted index number.

x) Explain chain base method.

xi) Compare Simple and Composite index number.

xii) Give Descibe only the ~~marked~~ steps involved in the construction of index number.

(Section II)

Q#3 write the short answers any 8 questions of the following (8x2 = 16)

(i) ~~Define the term~~ What is Histogram and which type of qualitative data it may be Constructed?

(ii) What is pie diagram?

iii) Distinguish between one-way and two-way tables.

iv) What do you understand by classification and tabulation?

v) What can you say about Skewness

Median = 26.01, $Q_1 = 13.73$, $Q_3 = 28.29$

vi) If distribution has mean 1403 and mode 1487. what can you say about Skewness

vii) Define the term Kurtosis.

(ix) Define range & and discuss its uses.

(x) Define the terms
(i) random Experiment (ii) Sample space

(x) Define the terms "Equally Likely Events" and "Exhaustive" Events and give one example in each case.

(xi) Differtiate between "Permutation" and "Combination".

(xii) Show that $P(A \cup B) = P(A) + P(B)$

Q#4 Write Short answers any "6" six questions of the following (6x2 = 12)

(i) Determin the Probability for the following events
(a) A sum 7 or 11 Comes up in a single toss of a pair of fair dice
(b) The sum 8 appears in a single toss of a pair of fair dice.

(ii) Define random variable and give an example.

(iii) Define Discrete and Continuous random variables.

(iv) What is Probability Density function.?

(v) Describe Properties of Expectation.

(vi) If $E(X^2) = 40$, and S.D(X) = 12 Find E(X)

(vii) If $E(X) = 4.1$, $E(X^2) = 17.63$ then find mean and Variance

(viii) Describe the properties of Binomial Experiment.

(ix) If in a binomial distribution the mean is 3 and S.D = 1.5 then find its Parameters

(SUBJECTIVE)
(SECTION II) (8x3 = 24)

Attampt any Three "3" questions of the following and Each question Carry Equal marks.

Q#5a) The given table Shows the distribution of the maximum loads (5) — tons supported by certain cables Produced by a Company. Determin (i) Median (ii) Mode

Maximum Loads	9.3–9.7	9.8–10.2	10.3–10.7	10.8–11.2	11.3–11.7	11.8–12.2	12.3–12.7	12.8–13.2
No. of Cables	2	5	12	17	14	6	3	1

Give the Empirical Relation between Mean, Median and mode. (3)

Q#6(a) Calculate Standard deviation and Co-efficient of variation from the following data. (8)

Groups	25-50	50-75	75-100	100-125	125-150	150-175
frequency	10	12	16	17	20	18

(b) What can you say of Skewness in each of the following case (4)

(i) $Q_2 = 26.01$, $Q_3 = 38.29$, $Q_1 = 13.73$

(ii) Mean = 1403 and Mode = 1487

Q#7(a) An inquiry into budgets of the middle class families in a city of England gave the following information.

Expenses on	Food 35%	Rent 15%	Clothing 20%	Fuel 10%	Misc. 20%
Price (1928)	150	30	75	25	10
Price (1929)	145	30	65	23	15

What changes in cost of living figures of 1929 show as compared to 1928? (4)

(b) A bag contains 4 red and 6 gree balls out of which 3 balls are drawn. Find the Probability of drawing

(i) 2 red and 1 green balls (ii) All red balls (4,4)

Q#8(a) There are three children in a family. Let the random variable denote the number of boys in a family. Write down the Possible outcomes and the values assigned by the random variable assuming equal chances for boys and girls

(b) Let X be a random variable with Prob. distribution as follows

x	1	2	3	4	5
f(x)	0.125	0.45	0.25	0.05	0.125

Find variance.

Salim
A/P G/C Jampur

Lecturer
G/C Rajanpur