MUHAMMAD IMRAN

STA100 – GENERAL MATHEMATICS AND BIOSTATISTICS

1. Two sets A and B are equal if **A ⊆ B and B ⊆ A** If two sets A and B are equal we write A = B to designate that relationship.
2. expression b2 – 4ac under the square root – called the **discriminant**
3. For a particular data the value of Pearson's coefficient of skewness is greater then zero. What will be the shape of distribution**?** ► **Positively skewed.**
4. The F-distribution always ranges from**:** ► **0 to +∞ .**
5. The location of the critical region depends upon: ► **Alternative hypothesis** .
6. To find the confidence internal for the ratio of two variances we use**:** ►**F-Distribution**
7. The degrees of freedom for a T-test with sample size 14 is ►**13 .**
8. The variance of the chi-square distribution is**:** ► **v 2.**
9. The degrees of freedom for a t-test with sample size 10 is**:** ► **9.**
10. The value of χ2can never be : ► **Negative.**
11. **The mean of the F-distribution is:…….**
12. **The total number of samples when sampling is done with replacement :** **nN**
13. **For testing of hypothesis about population proportion , we use:** ► **Z-test.**
14. **Analysis of variance is a procedure that enables us to test the equality of several:** ► **Means.**
15. **The classical definition of probability assumes:** **Equally likely evens**
16. **MSE stand for mean** **square error.**
17. **LSD stand for** **least significance difference.**
18. **For the degree of freedom v>2 the variance of t-distribution is always……**
19. Q

$$A = 2\begin{bmatrix} -2 & 0 & 1 \\ 4 & -1 & 3 \end{bmatrix}$$

Consider be a scalar matrix then which of the following is the dimension of the matrix A ?ddd

a) 3 x 2
b) 2 x 1
c) 2 x 2
d) 2 x 3

20. Q

Which of these equations has two roots?

Q4

Let $z_1 = 3-5i$ and $z_2 = -4-2i$ be two complex numbers, then which of the following is the value of $z_1 \cdot z_2$?

a) $-22+14i$
b) $-12+10i$
c) $-6+20i$
d) $14-22i$
e) Ans bbb

Q

Let $z_1 = 2+3i$ and $z_2 = 5+9i$ be two complex numbers, then which of the following is the value of $z_1 + z_2$?

a) $7-12i$
b) $7+12i$
c) $10+27i$
d) $18+15i$
e) Ans bbbb

Q

21. $A = \{x \mid x \in Z \wedge -3 < x \leq 3\}$

22.

STA100 - General Mathematics and Biostatistics

Q1. In normal distribution how much data fall in this interval $\mu \pm \partial^2$

Q3.name 4 commnly used type of average.

Q4. Find domain and range of f(x)= 5x+2

Q5.A teacher is making multiple choice quiz. she wants to give students same question but question appears in different order. If there are 27 students what least number does quiz contain.

Q6 def. Qualitative data and quantative data. also give example

Q7.write formula for regression for Yon X and write formula for intercept 'a'.

Q8.A random sample is drawn from a population with mean 33 variance ∂^2 if S =15 $\bar{x} = 40.4$ THEN compute t-statics,

Q9. Find A+ 2B where $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} and B = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$

Q10.following are the 2 random samples

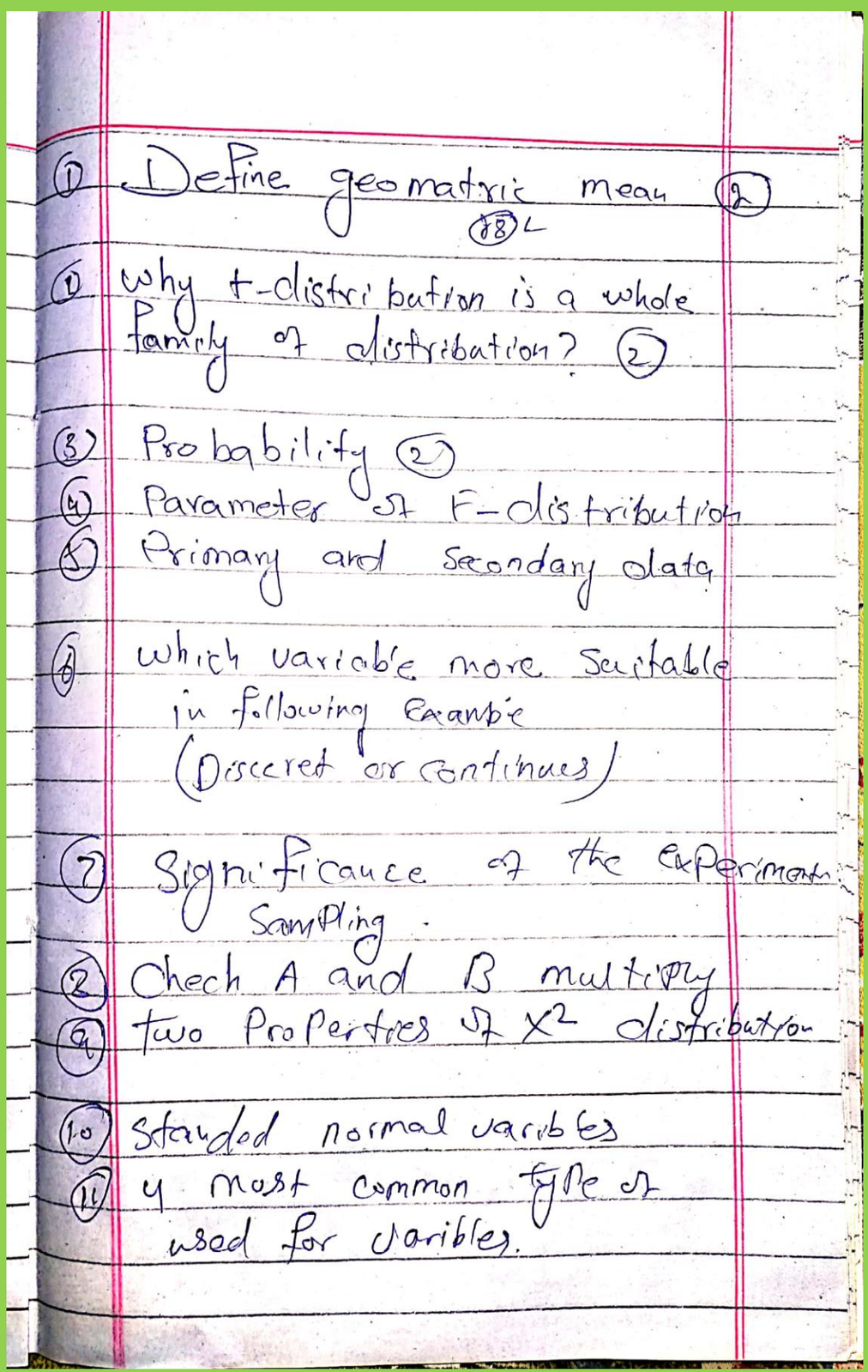
Sample 1	$n_1 = 8$	$\overline{x_{1=}} 5.17$	$\sum x^2$ =810
Sample 2	$n_2 = 9$	$\overline{x_2} = 2.8$	$\sum x^2$ =600

Construct 95% confidencal interval for the differenc b/w mean (where Syx=9.75)

1. **Find inverse A=$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$**

2. **Solve squre method $x^2 + 6x + 5$**

3. **find stem and leaf of the data 55,51,62, 91, 64, 66, 75,73,71, 82.**

4. 

5.

Stat 100

(1) Evalute $(3+5i)(-9-6i)$ (2)

(2) For the 10 value we are given $\Sigma|x_2-\bar{x}|=20$ Find M.D (2)

(3) If the function f is defined by $f(x)=\frac{3}{x}$, $0<x\leq 3$ Then find the range of f (3)

(4) Find the harmonic mean of the following values (10, 20, 30) (3)

(5) 62% of the student ged passed in the particular test This time 500 student appeare in the exam. Using normal approximation to the binomial (

(6) If $A=\{2,3,5\}$, $B=\{1,3,5\}$ $C=\{2,4,6\}$ Proue

$$A\cap(B\cap C)=(A\cap B)\cap C$$

6.

(7) Write The formula of Combined or - Proportion P_c of The samples (3)

(8) How many 2- Permutations are there of {A, B, C} write all of them. (5)

(9) If $f(x) \quad 0 \leq x \leq 3$ find range (2)

(10) From the give table fine The cammulative frequency.

(11) Find 15th value of the given values.

(12) If $z = (3+7i)$ find $|2-z^*|$

(13) From the given table find mean deviation.

7.

(19) Given Q_1 and Q_3 Find The Quartile range

(20) From the given graph, illustrate that Which is the distribution.

(21) Given $n_1 = n_2 = 16$, $S_1^2 = 50$, $S^2 = 16$ Construate 90% Confidence interval of the ~~Var~~ow variance ratio

$$\sigma_1^2 / \sigma_2^2$$

(22) $(\overline{A \cup B}) = \overline{A} \cap \overline{B}$

(23) Properties echelon form

(24) properties reduced echelon form.

(25) let t_1 and t_2 are Varibles

$v(t_1) = \frac{\sigma^2}{3}$ and $v(t_2) = \frac{3\sigma^2}{2}$

8. (8) During the correct Population census what type of Data was Collect. ?

(9) we take ——— on y- axis to construct a frequency Polygon?

(10) The mode value from raw data can be obtained by help of ——?

(11) the formula of mid range is ——→ $\frac{x_0 + x_m}{2}$

(12) ——— is not a measure of Dispersion?

(13) What will be the value of Total amount of dispersion obtained by summing the $(x - \bar{x})$?

9.

(26) Write regression equation for y on x also. For finding intercept

(27) Average high of the school is 5.2 inch 12 Student hight are given Calculate Sampling error.

(28) Suppose that $\chi = \{a, b\}$ & possible value Combination of x and find the value of $C(2,2)$

(29) If the coin tosse what is the Probability of No. of head.

(30) Why statics decision making Science.

(31) Benefit of experimental method

(32) what is negative Seeing Curve

10.

(33) If The Polygone Freq—
or Students and There dac
Pollet meny.

(34) The Exact value of Sin
sin 120°

(35) Random and non random
sample.

(36) Leaf and Stem method

(37) Find The Slop $3x + 2y = 9$

(38) $\tan\theta / \sin\theta$ = CESθ

11.

(1) If $A = \{2, 4, 6, 8, 10, 12, 14, 19\}$
$B = \{12, 13, 14, 15, 16\}$ then $A \cup B$?

(2) let $Z_1 = 2 - 3i$ $Z_2 = -2 + 3i$
The $Z_1 - Z_2$ will be ?

(3) let $f(x) = 5x^3 + 3x - 9$ and
$g(x) = x^2$ then $fog(x)$?

(4) The quadractic formula for
The $ax^2 + bx + c = 0$ is ?

(5) To multiply a matrix by
a scalar we multiply
each ____ in the matrix
by that scalar ?

(6) According to Property of
Parameter it is ?

(7) Data obtained by ministry
of food is ..example of ____
Secondary Data collector

12.

(14) The deviation of a distribution form symmetry is [Skewness]

(15) In the regression line $y = a + bx$ the non-random value?

(16) What will be the Probability of one black card out of 52 Playing cards?

(17) For the normal distribution with $\mu = 55$ and $\sigma = 10$ how much area will be found under curve of the

13.

$v > 2$ The variance of t- distribution is always ____

(21) The value of x^2 never be Negative

(22) mean of F-distribution

(23) F distribution range form (0 to ∞)

(24) LSD ____ stand for Least Significant Difference

(25) MSE Stand for ____ Mean Square Error

(26)

$$\mu = \frac{v_2}{v_2 - 2} \quad \text{for } v_2 > 2$$