THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

Q.1.　Answer the following short questions:　　　　　　　　　　**(15x2=30)**

1. Define statistics. What are two types of statistics?
2. Differentiate between discrete and continuous variables with examples.
3. Find mean of the following set of data: 32, 41, 45, 23, 16, 28, 35, 49, 25, 29, 29, 32, 33, 37, 39, 40, 45, 33
4. Write down properties of standard deviation.
5. Define frequency distribution and describe its types.
6. If scores on a test are normally distributed with mean = 40 and standard division = 7.5, what is the z score of a student whose marks in the test are 60?
7. What are the differences between One way and Two way ANOVA?
8. Write down steps in construction of frequency polygon.
9. What is normal distribution? Write down its properties.
10. What are the advantages of graphic representation of data?
11. What is the difference between correlation and regression?
12. Write down assumptions of parametric statistics.
13. What is chi square test? What are two types of Chi Square test?
14. Define critical region. Describe critical region for one tailed and two tailed test.
15. Differentiate between type I and type II errors.

Q.2.　Answer the following questions.　　　　　　　　　　**(3x10=30)**

1. The following data summarizes mid term and final term exam scores of 7 students in a statistics class. Find Pearson correlation between the scores.

Mid term (X)	79	95	81	66	87	94	59
Final Term (Y)	85	97	78	76	94	84	67

2. Two independent groups of individuals, one with treatment A and other with treatment B were compared. Find if there is any significant mean difference between them. Use $\alpha = .05$.

Treatment A	Treatment B
21	19
18	18
19	18
22	22
23	22
19	23
22	20
20	22

3. The following table shows number of students present on days of the week. Run chi square test of goodness of fit to find if there is any significant difference (at $\alpha = .01$) in number of students present on any particular day.

Day of the week	Monday	Tuesday	Wednesday	Thursday	Friday
Number of students present	125	88	85	94	108