Subject: DE 525-Statistical for Economists I   FM: 60

Level/program: Master (M.A)   Semester: II   Time: 3 Hours   PM: 30

Candidates are required to answer the questions in their own words as far as practicable.

Attempt ALL of the following Very Short Answer Questions.   **10x1=10**

1. What do you mean by primary and secondary data?
2. What is frequency curve?
3. Find the mean of the following data: 500, 200, 350, 400, 600.
4. Find the range and coefficient of range of the following data:
   Height (in cm): 160, 158, 155, 162, 165, 156.
5. What is the standard deviation which is considered the most popular measure of dispersion?
6. What is scatter diagram?
7. What is random sampling?
8. Write a short note about the concept of universal and sample.
9. What are properties of regression coefficient?
10. Write a short note about degree of freedom and level of significance.

Attempt any Three of the Following Long Questions.   **3x8 =24**

11. What is classification? Describe the different types of classification.
12. Write down the merits and demerits of median. Calculate the missing frequency from the data of 105 families if the median is 25.

Marks:	0-10	10-20	20-30	30-40	40-50
No. of Students:	14	25	27	a	15

13. What types of random samples are there? Describe briefly.
14. What is correlation/ Calculate the rank correlation coefficient of the following data:

X:	80	78	75	75	68	67	60	59
Y:	12	13	14	14	14	16	15	17

Attempt any TWO of the Following Long Questions.   **2x13 =26**

15. An analysis of daily salaries paid to the workers in two firms A and B belonging to the same industry gives the following result:

Firms	A	B
No. of workers:	50	100
Average daily salary(Rs.):	54.1	53.3
Variance of salary:	84	49

   a. Which form A or B has large wage bill?
   b. What is the total salary of both the villages put together?
   c. In which firm A or B, is there greater variability in individual wages?
   d. Which firm is more equitable in regard to salaries?

16. Define regression analysis. Following data are given:

Marks in English (x)	28	32	40	44	44	48	48
Marks in Nepali (y)	30	25	25	35	40	40	45

   a. Find the two regression equations.
   b. Find the coefficient of correlation between the marks in English and nepali.
   c. Find the most likely marks in nepali when the marks in English is 50.

17. What is hypothesis testing? Write down the process of hypothesis testing. Discuss Chi-square test. The theory predicts the proportion of beans in the four groups A,B,C and D should be 9: 3: 3: 1.In an experiment among 1600 beans, the numbers in the four groups were 882, 313, 287 and 118. Does the experimental result support the theory? At a significance level of 5% and degree of freedom is 3.