[LD 534] **SUB CODE: 2160**

M.D. (SIDDHA) DEGREE EXAMINATION – OCTOBER 2013

FIRST YEAR

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PAPER V – BIO-STATISTICS

Q.P.Code : 322160

Time : 3 hours **Maximum: 100 marks**

I. Long essay: **(2x20=40)**

1. Haemoglobin level of students (in gm%) are as given below.

   9 10 11 9 10 10 15 14 13 12 11
   10 9 10 11 12 14 14 15 13 13 12
   14 11 12.

   a. Draw a histogram. Find mean and standard deviation to understand the variation.

   b. Apply a suitable significance test whether the sample belongs to population mean Haemoglobin level of 12. The 't' value for 24 d. f=2.06at p=0.05.

2. The age (X) and systolic blood pressure (Y) of 11 persons are given below

   Age (X): 48 55 53 47 59 57 42 38 60 50 58
   BP (Y) : 151 160 153 146 165 160 140 135 170 155 153

   a. Determine the correlation coefficient between X and Y

   b. Fit a linear regression equation of Y on X and estimate the systolic blood pressure of a person of 40 years age.

II. Short notes: **(10x6=60)**

1. Explain various types of data and one example for each of them.
2. The average incubation period of rabies in three risk groups is 30,40 and 50 days. There are 50,60 and 70 patients respectively in each risk group. Calculate overall average incubation period for rabies.
3. Explain different graphs used in describing the data.
4. Explain Merits and Demerits of sampling
5. Write additive and multiplicative laws of probability
6. Define characteristics of normal distribution
7. Explain the different steps in Test of significance.
8. Describe birth and death rates used in vital statistics.
9. Describe about prevalence and incidence rates.
10. Explain experiment research in drug testing.

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