

**Departmental Examination of Other Gazetted Officers of Himachal Pradesh  
April, 2016**

Paper No.3 Economics and Statistics  
Time Allowed: Three Hours

Max. Marks:100

**Note:- Attempt any five questions. All questions carry equal marks.**

Question I (a) Define the terms Primary and Secondary methods of data collection and in what special circumstances are two methods suitable?  
(10)

(b) Design a questionnaire to ascertain the view of the people concerning the measure to be undertaken for improving the Environment in the city?  
(10)

Question II Calculate the mean deviation from the following data. What light does it throw on the social conditions of the community?  
(15+5)

Difference in years	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	
Frequency	449	705	507	281	109	52	16	4	

Question III Do you agree with the following, comment:

(i) Rate for a certain commodity in the first week is 4 Kg for a rupee and in the second week is 8 Kg for a rupee. So the average price is  $(4+8)/2=6$  Kg for a rupee.

(ii) Usually the attendance of a Office is 50 persons per day. Therefore the total attendance for 100 working days is 5000.

(iv) the increase in the price commodity x was 20%. Then the price decreased 25% and again increased 15%. So the resultant increase is (i) 15% & (ii) 10%

(v) The rate of increase in the number of cows in India is greater than the population. So the people of India are now getting more milk per head.  
(5x4)

Question IV (a) What do you mean by weights? Why are they assigned? Point out a few cases in which weighted average should be used? (10)

(b) Monthly incomes of the families are given below in rupees:  
2000, 35, 400, 15, 40, 1500, 300, 6, 90, 250, 20, 12, 450, 10, 150, 8, 25, 30, 1200, 60.

Calculate the arithmetic mean and geometric mean of the above series? (5+5)

Question V (a) Describe the terms Interpolation and Extrapolation? (10)

(b) What are the various methods of estimating seasonal variations in historical series? (10)

Question VI Describe the concept of National Income and State Income at current and constant price? What do you understand by the term Per Capita Income, Explain? (20)

Question VII (a) Mention the steps to be taken before initiating the work of collection of data and what is meant by statistical enquiry? (10)

(b) What are the various types of data presentation? How and where are they useful in presenting the data? (10)

Question VIII : Write short notes on any three (7+7+6)

- (i) Random Sampling
- (ii) Line of best fit
- (iii) Sample Surveys and Census
- (iv) Continuous and Discrete Series
- (v) Normal Distribution