# MIZORAM PUBLIC SERVICE COMMISSION 

Limited Departmental Examinations for Promotion to<br>Junior Grade of Mizoram Planning, Economics \& Statistical Service under Planning \& Programme Implementation Department, October, 2016

## PAPER - II (STATISTICS)

Marks for each question is indicated against it.
Attempt any five (5) questions.

1. Define statistics and explain its use. Describe different methods of collecting the data. Differentiate between primary and secondary data.
$(5+5+10=20)$
2. Define Mean, Median and Mode. Also calculate the mean and mode for given data. $\{2,8,13,7,16,4,32,18,16,24,44,46,40\}$
(9+11=20)
3. Define correlation and correlation coefficient. What is the limit of correlation coefficient? Find the correlation from given data. Calculate the correlation coefficient for the following heights (in inches) of fathers ( X ) and their sons ( Y ).
$(6+5+9=20)$
X : $65 \quad 66 \quad 67 \quad 68 \quad 69 \quad 70 \quad 71 \quad 67$
Y : $\begin{array}{llllllll}67 & 68 & 64 & 72 & 70 & 67 & 70 & 68\end{array}$
4. Define Index number? What are the uses of index number? Discuss various problems involved in the construction of index number.
$(5+5+10=20)$
5. Discuss in detail the activities, organization and functions of Central Statistics Organization (CSO) of India.
$(5+5+10=20)$
6. From the following data, obtain the two regression equations. Also find the most likely marks in Statistics when marks in Economics are 30?
(15+5=20)
Marks in Economics: $\begin{array}{lllllllllll}25 & 28 & 35 & 32 & 31 & 36 & 29 & 38 & 34 & 32\end{array}$
Marks in Statistics: $\begin{array}{lllllllllll}43 & 46 & 49 & 41 & 36 & 32 & 31 & 30 & 33 & 39\end{array}$
7. What is time series? Name various components of a time series. Give the idea of any two of the components.
$(5+5+10=20)$
8. Write a short note on any two (2).
$(2 \times 10=20)$
(a) Different method of Sampling.
(b) Agriculture Survey.
(c) Economic Census.
(d) Registration of Death and Births.
(e) Scatter diagram.
