

# MIZORAM PUBLIC SERVICE COMMISSION

## GENERAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF JUNIOR GRADE OF MIZORAM PLANNING, ECONOMICS & STATISTICAL SERVICE UNDER PLANNING & PROGRAMME IMPLEMENTATION DEPARTMENT.

JANUARY, 2020

### STATISTICS PAPER-I

Time Allowed : 3 hours

Full Marks : 100

*Attempt any 10 (ten) questions taking 2 (two) questions from each unit.  
All question carry 10 marks each.*

#### UNIT-I

1. Name two kinds of statistical data and describe them in brief.
2. What are the requisites of a reliable data? What precautions should be taken in the planning of a statistical survey?
3. Give briefly the characteristics of a good questionnaire or a schedule.

#### UNIT -II

4. What is a regression model? What are the assumptions made in a linear regression?
5. How can the parameters  $b_0$  and  $b_1$  be estimated in linear regression?
6. Define correlation coefficient. What purpose is being served by correlation coefficient?

#### UNIT -III

7. Define index number. What are the uses of index numbers?
8. Give the unweighted price index number. Briefly discuss the unweighted quantity index.
9. What is consumer price index? What purpose is served by consumer price index?

#### UNIT -IV

10. What is a time series? What purpose is served by time series analysis?
11. Explain the various components of time series.
12. How do you fit a trend line by the method of least square?

#### UNIT -V

13. Explain conditional probability. Give the multiplication rule for the simultaneous occurrence of two events A and B.
14. Discuss Bayes probability and give formula for its calculation.
15. Give Bernoulli distribution and its properties.

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