

Bago University
Department of Geography
Second Semester Examination, September, 2019

Third Year (B.A)
(Geography Specialization)

Geog. 3110
Inferential Statistics in Geography
Time allowed (3) hours

Answer ALL questions. Illustrate your answer with sketch maps and diagrams wherever necessary.

1. At Yangon, 40-year record of the rainfall data shows the annual average precipitation of 120 inches, with standard deviation of approximately 18.
Calculate (a) The percentage of occurrence and
(b) The number of years which lie
 - (1) between 102 inches and 138 inches
 - (2) between 84 inches and 156 inches
 - (3) under 66 inches and over 174 inches
2. A car company produced new motor vehicles that have an average life expectancy of 15 years, with a standard deviation of 40 months. Assuming that the life expectancy of the car is normally distributed, find the probability of a car.
 - (a) Like to break down in less than 10 years.
 - (b) will last more than 12 years?
 - (c) will last more than 20 years?

The normal distribution function

Z	%
1.5	6.68
1.6	5.48
1.7	4.46
0.9	18.41

P.T.O

3. In a given area it is known that 60 % of the farms included dairying within their economy. In a brief visit, it proves possible to visits three randomly selected farms within this area. What are the probabilities of these visits including 3, 2, 1 or even 0 farms with dairying activities?
4. Samples are often small in geographical studies. A rainfall data (in mm) is below.

Rainfall (in mm) for 12 years record

171.2	149.0	126.5	120.8
124.4	106.5	93.40	96.7
122.1	93.5	96.2	94.2

- (a) Calculate the mean and the standard deviation.
 (b) Calculate the best estimate of standard deviation.
 (c) Find the 95% confidence limits for the simple mean.

* t value from t table =2.2

5. A study of the number of farm sites with their characteristic provided the following table.

Site	No. of farm sites	Types of terrain as % of all lands
1.Alluvium	10	10
2.Terrace	100	35
3.Steep- Slopes	2	10
4.Limestone Plateau	38	25
5.Sandstone Plateau	50	20
Total	200	100

Use the X^2 test to determine, the significance of the differences between the farm sites and these five groups of terrains.
