

# PRACTICAL MANUAL OF STAT 3202

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# Welcome

Welcome to the book **PRACTICAL MANUAL OF STATISTICAL METHODS AND APPLICATIONS (STAT 3202)**.



# Preface

**Note:** This book is published in MeLoN (Module for e-Learning & Online Notes) . The online version of this book is free to read here. You can download the PDF and take print out while submitting the records.

If you have any feedback, please feel free to contact Dr.Pratheesh P. Gopinath.  
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This is a Practical Manual of STAT 3202 covering the syllabus of statistics course in B.Sc.(Hons.) Agriculture under Kerala Agricultural University





# 1

## Exercise 1

### 1.1 Construction of Frequency Distribution

Steps in construction of frequency distribution:

- Determine the number of classes
- Determine the class width
- Set up the individual class limits
- Tally the items into the classes
- Count the number of items in each class

Table below shows the data related to the grain yield in (g /plot) of a sorghum variety from experimental plots of equal area from a continuous frequency distribution. Prepare a frequency distribution and cumulative frequency distribution

194	129	166	164	154	139	128	120	80	168
150	186	156	179	153	157	155	115	676	171
118	143	191	148	152	187	129	119	139	177
191	214	167	165	186	111	155	164	125	99
86	170	111	169	141	164	89	180	225	139
127	136	144	165	154	74	156	142	162	160
171	134	177	178	168	165	188	131	154	107
189	156	176	150	142	144	153	190	183	180
161	170	195	136	91	187	152	145	98	166

**SOLUTION:**

Number of Classes,  $k = 1 + 3.322 \log_{10} N =$

Class width,  $C = | \max - \min | / k =$

Lower limit as  $L = \min - \frac{c' - k' - (\max - \min)}{2} =$

## 2

# Exercise 2

### 2.1 Measures of Central Tendency

1. If the weights of 5 ear heads of sorghum are 100, 102, 118, 124 & 126, find the mean weight?
2. Calculate the mean value for the frequency distribution of weights of sorghum ear heads given below?

Wt of ear head	40-60	60-80	80-100	100-120	120-140	140-160	160-180	180-200
number	6	28	35	55	30	15	12	9

3. If the weight of sorghum ear heads are 45, 60, 48, 100 & 65, find the median.
4. Find out the median and mode for the frequency distribution of sorghum ear heads in question no. 2.
5. Calculate the mode value for the following frequency distribution

C.I	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Freq.	4	2	18	22	21	19	10	3

6. Find out the mean, median and mode for weekly wages of 100 workers in a farm

Weekly.wages	Number.of.workers
20-24	4
25-29	5
30-34	12
34-39	23
40-44	31
45-49	10
50-54	8
55-59	5
60-64	2

7. The following data gives number of flowers observed from 20 plants. Find the arithmetic mean, geometric mean, harmonic mean.

42, 88, 37, 75, 98, 93, 73, 62, 96, 80, 52, 76, 66, 54, 73, 69, 83, 62, 53, 79

8. Table below gives the distribution of the heights of 60 students in a Senior High school. Find Q1 & Q3

Height	145-150	150-155	155-160	160-165	165-170	170-175
No: of students	3	9	16	18	10	4

9. Find 25, 50 & 75 and D5 and Q2 for the frequency data given below

class	frequency	cf
0-10	11	11
Oct-20	18	29
20-30	25	54
30-40	28	82
40-50	30	112
50-60	33	145
60-70	22	167
70-80	15	182
80-90	12	194
90-100	10	204

**3**

## References