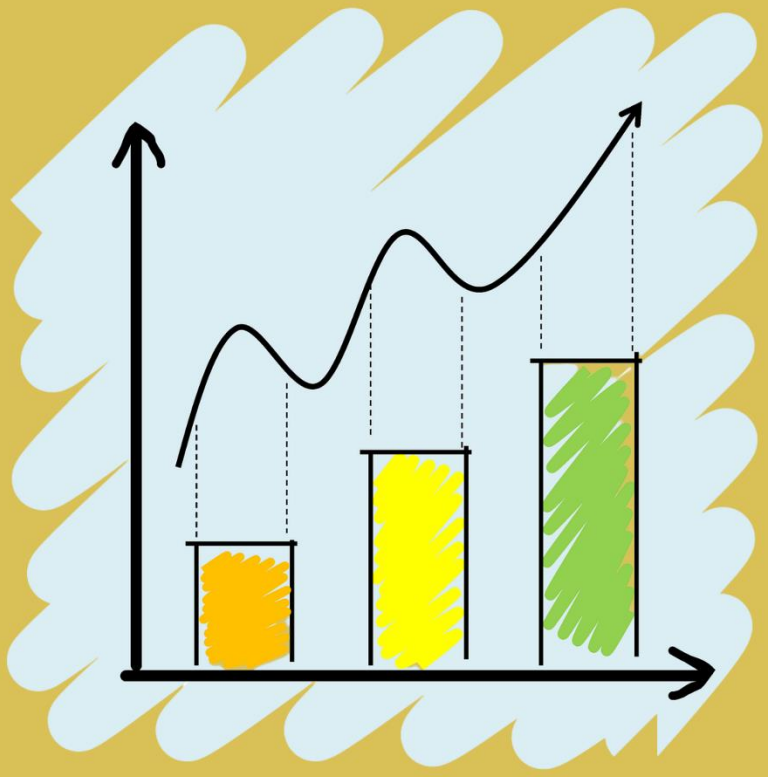
Practical Manual

STAT 3202

Statistical Methods and applications



Dr. Pratheesh P Gopinath

Neethu S Kumar

DEPARTMENT OF AGRICULTURAL STATISTICS
COLLEGE OF AGRICULTURE, VELLAYANI
KERALA AGRICULTURAL UNIVERSITY

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Sl. No.	Exercise	Date	Remarks

Date _____

Exercise No: 1

Construction of Frequency Distribution

Steps in construction of frequency distribution:

Step 1. Determine the number of classes
Step 2. Determine the class width
Step 3. Set up the individual class limits
Step 4. Tally the items into the classes
Step 5. Count the number of items in each class

1. The following 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.

196	169	126	181	174	164	209	143	65	165
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

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

Class width, C = | max − min|/ k =

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

Date _____

Exercise No: 2

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?

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 following data

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

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	80-90
Freq.	4	2	18	22	21	19	10	3	1

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 $P25$, $P50$& $P75$ and D5 and Q2 for the data given below

class	**frequency**	**cf**
0-10	11	11
10-20	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