GURUDAS COLLEGE

B. Sc. SEMESTER V (Honours) Odd Semester Examination, 2021
Online Practical Examination
Subject: BOTA
Subject Category: Honours
Course: **BOT-A-DSE-A-5-1-P**

Course Name: **BIOSTATISTICS**

Date of Examination: 21st Jan, 2022

All questions carry equal marks

The figures in the margin indicate full marks

Time: 1 Hour & 30 minutes   **FM: 30**

1a) Define χ^2 and mention its formula. What do you mean by analysis of variance (ANOVA)?   3+2

b) Distinguish between a population and a sample. What is frequency? What is a frequency table? What do you mean by a discrete variable?   2+1+1+1

2. Determine the segregation ratio of seed **sample "A"** having **79 brown seeds** and **17 white seeds**. Test the Goodness of fit by chi-square method. Comment on nature of segregation. Chi-square table has been provided here.   2+5+3

79 Brown Seeds   17 White Seeds

3. The length of 10 seedlings of *Vernonia cinerea* was measured in centimetre. The data is given below.
        Length in cms.   10, 3, 2, 7, 5, 9, 3, 8, 6, 7,

Compute Mean, Median and Mode from the above data. Comment on the nature of mode.
                                                                                    4+4+1+1

Chi square distribution Table

df	0.99	0.98	0.95	0.90	0.80	0.70	Probability 0.50	0.30	0.20	0.10	0.05	0.02	0.01	0.001
1	0.0^3157	0.0^3628	0.00393	0.0158	0.0642	0.148	0.455	1.074	1.642	2.706	3.841	5.412	6.635	10.827
2	0.0201	0.0404	0.103	0.211	0.446	0.713	1.386	2.408	3.219	4.605	5.991	7.824	9.210	13.815
3	0.115	0.185	0.352	0.584	1.005	1.424	2.366	3.665	4.642	6.251	7.815	9.837	11.345	16.266
4	0.297	0.429	0.711	1.064	1.649	2.195	3.357	4.878	5.989	7.779	9.488	11.668	13.277	18.467
5	0.554	0.752	1.145	1.610	2.343	3.000	4.351	6.064	7.289	9.236	11.070	13.388	15.086	20.515
6	0.872	1.134	1.635	2.204	3.070	3.828	5.348	7.231	8.558	10.645	12.592	15.033	16.812	22.457
7	1.239	1.564	2.167	2.833	3.822	4.671	6.346	8.383	9.803	12.017	14.067	16.622	18.475	24.322
8	1.646	2.032	2.733	3.490	4.594	5.527	7.344	9.524	11.030	13.362	15.507	18.168	20.090	26.125
9	2.088	2.532	3.325	4.168	5.380	6.393	8.343	10.656	12.242	14.684	16.919	19.679	21.666	27.877
10	2.558	3.059	3.940	4.865	6.179	7.267	9.342	11.781	13.442	15.987	18.307	21.161	23.209	29.588
11	3.053	3.609	4.575	5.578	6.989	8.148	10.341	12.899	14.631	17.275	19.675	22.618	24.725	31.264
12	3.571	4.178	5.226	6.304	7.807	9.034	11.340	14.011	15.812	18.549	21.026	24.054	26.217	32.909
13	4.107	4.765	5.892	7.042	8.634	9.926	12.340	15.119	16.985	19.812	22.362	25.472	27.688	34.528
14	4.660	5.368	6.571	7.790	9.467	10.821	13.339	16.222	18.151	21.064	23.685	26.873	29.141	36.123
15	5.229	5.985	7.261	8.547	10.307	11.721	14.339	17.322	19.311	22.307	24.996	28.259	30.578	37.697
16	5.812	6.614	7.962	9.312	11.152	12.624	15.338	18.418	20.465	23.542	26.296	29.633	32.000	39.252
17	6.408	7.255	8.672	10.085	12.002	13.531	16.338	19.511	21.615	24.769	27.587	30.995	33.409	40.790
18	7.015	7.906	9.390	10.865	12.857	14.440	17.338	20.601	22.760	25.989	28.869	32.346	34.805	42.312
19	7.633	8.567	10.117	11.651	13.716	15.352	18.338	21.689	23.900	27.204	30.144	33.687	36.191	43.820
20	8.260	9.237	10.851	12.443	14.578	16.266	19.337	22.775	25.038	28.412	31.410	35.020	37.566	45.315

Instructions for submission of answer scripts

1. Write the front page/top sheet as per instruction. Give page numbers to each page.
2. Write your CU Roll number in each page.
3. Scan the pages in sequence and make a single PDF file.
4. Rename file as per instruction.
5. Email the PDF file within the stipulated time the following email addresses:

Email IDs :
1) gdcexamhons@gmail.com
2) botasem2gdc@gmail.com