Balasaheb Desai College, Patan
Department of Statistics
B.Sc. I. (Sem. I)
(Paper I and II)

Name of the Teacher: Dr. Supanekar S. R.

Sr. No.	Topic	YouTube Link
Paper I Unit 1.1 Statistical Methods		
1	Introduction to statistics	https://youtu.be/u535lXoEV3I
2	Population and Sample	https://youtu.be/X_cAyKeYnTg
3	Data, Primary and secondary	https://youtu.be/Da5vtw925sQ
4	Quantitative and Qualitative data	https://youtu.be/O95K80l3Y9Y
5	Basic concepts in Statistics: Review	https://youtu.be/vxRJ7e1XDc0
6	Graphical representation: Histogram	https://youtu.be/hrkKQxeCR9I
7	Graphical representation: Ogive curve	https://youtu.be/FAjW98BYVX4
Paper I Unit 1.2 Measures of central tendency		
8	Introduction	https://youtu.be/VVMOJ3GlsEw
9	Arithmetic Mean (Definition and Computation)	https://youtu.be/-3pinIwN6DY
10	Arithmetic Mean (Properties of A.M.)	https://youtu.be/6rSZLfOB6dE
11	Arithmetic Mean (Combined and weighted mean)	https://youtu.be/lDyxKUJgQXk
12	Geometric Mean (Definition and Computation)	https://youtu.be/RGAykCjCNjM
13	Geometric Mean (Properties)	https://youtu.be/_2zatsphAGY
14	Harmonic Mean (Properties)	https://youtu.be/3voOh9weFn0
15	Relation between A.M. G.M. and H.M	https://youtu.be/W2l27w0VQfo
16	Median (Definition and Computation)	https://youtu.be/vOl6UsvZwQY
17	Median (Derivation of formula)	https://youtu.be/BLrgANdg7_Y
18	Mode (Definition and Computation)	https://youtu.be/XTpF2aBuQzo

19	Mode (Derivation of formula)	https://youtu.be/9y9pjcsLSik
20	Partition values (Definition and formulas)	https://youtu.be/0ZG0r_gHq9Y
21	Partition values (Examples)	https://youtu.be/OP1Mw2aNWaQ
22	Partition values (Percentiles: special case)	https://youtu.be/Wza36GuZDmI
23	Comparison and Examples	https://drive.google.com/file/d/16YKPQkgsYe7E71IhzP4Ck39UEHdiKVQV/view?usp=drivesdk
Paper I Unit 2.1 Measures of dispersion		
24	Measures of Dispersion I (Introduction)	https://youtu.be/cAYfMYwRhI8
25	Measures of Dispersion II (absolute and relative measures)	https://youtu.be/PWOdnhJHOiM
26	Measures of Dispersion III (Range and Quartile Deviation)	https://youtu.be/psKDLUlBD1A
27	Measures of Dispersion IV (Mean Deviation (M.D.) and its computation)	https://youtu.be/w6cInVq_0Ws
28	Measures of Dispersion V (Minimal property of mean deviation)	https://youtu.be/0zhVX9tQ8Co
29	Measures of Dispersion VI (Mean square deviations and its minimal property)	https://youtu.be/RJqK9Xl_814
30	Measures of Dispersion VII (Variance, Standard Deviation (S.D.) and Coefficient of Variation (C.V.))	https://youtu.be/xijHUHZg4-0
31	Measures of Dispersion VIII (computation of Variance, S.D. and C.V.	https://youtu.be/VLiPSZ8p9PA
32	Measures of Dispersion IX (Properties of S.D.)	https://youtu.be/VG5LBK1datk
33	Measures of Dispersion X (Problems)	https://youtu.be/t_Yd1OzbtDk

B.Sc. I. (Sem. II)
(Paper III and IV)

Sr. No.	Topic	YouTube Link
Paper III Unit 1.1 Correlation		
34	Correlation I (Introduction)	https://youtu.be/DxwWKjOe8Z4
35	Correlation II (Types of correlation)	https://youtu.be/Wor3hsC9fbY
36	Correlation III (Scatter diagram method)	https://youtu.be/ffMrcVyIAkk
37	Correlation IV (Covariance)	https://youtu.be/2ePNyA410hE
38	Correlation V (Karl Pearson's correlation coefficient (r))	https://youtu.be/V8fr1Ae_KME
39	Correlation VI (Properties of Karl Pearson's correlation coefficient (r))	https://youtu.be/5UgopfHZoew
40	Correlation VI (2) (Computation of correlation coefficient (r))	https://youtu.be/XyIImG5-h58
41	Correlation VII (Spearman's Rank correlation coefficient (R))	https://youtu.be/WhXhfMFqflQ
42	Correlation VIII (Derivation of Formula for Spearman's Rank correlation coefficient)	https://youtu.be/oeiLYY7LFQQ
43	Correlation IX (Properties of Spearman's Rank correlation coefficient)	https://youtu.be/K5VWesoBUHo
44	Correlation X (Spearman's Rank correlation coefficient for tied observations)	https://youtu.be/8RmObFJsNh0
45	Correlation XI (Problems)	https://youtu.be/hq7aA6IDqSU
Paper III Unit 1.2 Regression		
46	Regression I (Regression Lines)	https://youtu.be/3RWMeiiy_5M
47	Regression II (Derivation of fitting of Regression line)	https://youtu.be/0a_XlOmGlTg
48	Regression III (Fitting of Regression line)	https://youtu.be/VRZIRXUV1Pk
49	Regression IV (Regression coefficients)	https://youtu.be/KnSAm6jxHxg
50	Regression V (Properties of Regression coefficients-I)	https://youtu.be/z341Rg0HW8Q
51	Regression VI (Properties of Regression coefficients-I)	https://youtu.be/GpTiabErbk0
52	Regression VII (Acute angle between two Regression lines)	https://youtu.be/3wRM0JrnUSI

53	Regression VIII (Coefficient of determination and non-linear Regression)	https://youtu.be/qhwkNLAlLDU
54	Regression IX (Problems on Regression)	https://youtu.be/3CVugyjXKrc
55	Regression X (Problems on Regression)	https://youtu.be/FJ9_wq-s9Oo
Paper III Unit 2.1 Index Number		
56	Index Number I (Introduction)	https://youtu.be/ola40w2dqnE
57	Index Number II (Definition and Uses)	https://youtu.be/4euUxFGyRos
58	Index Number III (Problems in construction of I.N.)	https://youtu.be/8xILBHqenmw
59	Index Number IV (Notations and Terminology)	https://youtu.be/X19dOx3GnkY
60	Index Number V (Simple aggregative method)	https://youtu.be/be2HU89umI8
61	Index Number VI (Simple average of relative method)	https://youtu.be/pIKmdXwJ3RM
62	Index Number VII (Weighted aggregative method)	https://youtu.be/-0pXhBW1k8M
63	Index Number VIII (Weighted average of relative method)	https://youtu.be/ZDsGzjBF_mw
64	Index Number IX (Comparison of Index numbers)	https://youtu.be/iMmfLu4kMvQ
65	Index Number X (Relation between I.N.'s)	https://youtu.be/Qr94UFkJkzk
66	Index Number IX (Examples on I. N.)	https://youtu.be/LjXYbikTqXs
Paper IV Unit 1.1 Univariate Probability distribution		
67	Univariate Probability Distribution Part I (Random variables)	https://youtu.be/R4fQXyAl02I
68	Univariate Probability Distribution Part II (Probability mass function)	https://youtu.be/kJ9vTClbT1A
69	Univariate Probability Distribution Part III (Examples on p.m.f.)	https://youtu.be/Ck-4xk4g8qw
70	Univariate Probability Distribution Part IV (p.m.f of function of p.m.f.)	https://youtu.be/pHAKL3Af__c
71	Univariate Probability Distribution Part V (c.d.f and its properties)	https://youtu.be/M1c-k9jdI9o
72	Univariate Probability Distribution Part VI (problems on c.d.f)	https://youtu.be/h4uXhCbKq4c
73	Univariate Probability Distribution Part VII (Median and Mode)	https://youtu.be/c7jBu1Pg0V0

Paper IV Unit 1.2 Mathematical Expectation		
74	Mathematical Expectation I (Mean)	https://youtu.be/CG-d-wYWXn4
75	Mathematical Expectation II (Expectation of function of r.v.)	https://youtu.be/eYyyIbVcJRw
76	Mathematical Expectation III (Variance of r.v.)	https://youtu.be/Ab7to5AOmZE
77	Mathematical Expectation IV (Moments, skewness and kurtosis)	https://youtu.be/4JKW7RDewS4
78	Mathematical Expectation V (p.g.f.)	https://youtu.be/KKnaKT3yxes
Paper IV Unit 2.1 Standard Probability distributions		
79	Standard Probability distributions I	https://youtu.be/OBQEW7hvnsA
80	Standard Probability distributions II (Bernoulli's Distribution)	https://youtu.be/XZRW8nCeAaA
81	Standard Probability distributions III (Binomial distribution-I)	https://youtu.be/hbfy6jr9j4w
82	Standard Probability distributions IV (Binomial distribution-II)	https://youtu.be/z13nEvajOUo
83	Standard Probability distributions V (Binomial distribution-III)	https://youtu.be/0_9iloqnT_o
84	Standard Probability distributions VI (Binomial distribution-IV)	https://youtu.be/17q_FOCuXpE
85	Standard Probability distributions VII (Hypergeometric distribution-I)	https://youtu.be/v8yqGyaZ8yg
86	Standard Probability distributions VIII (Hypergeometric distribution-II)	https://youtu.be/h0nzhd_lTSE
87	Standard Probability distributions IX (Hypergeometric distribution-II)	https://youtu.be/h3VTN340A3g
88	Standard Probability distributions X (Hypergeometric distribution-II)	https://youtu.be/LBpdaqugowo

B.Sc. II. (Sem. III)
(Paper V and VI)

Sr. No.	Topic	YouTube Link
Paper V Unit 1.1 Discrete distributions (Poisson, Geometric and Negative binomial distribution)		
89	Definition of Poisson distribution	https://youtu.be/C8dYd0XpIbo
90	Mean of Poisson distribution	https://youtu.be/mQUXrYBLNf0
91	Variance Poisson distribution	https://youtu.be/z6-bD7hiViY
92	P.g.f of Poisson distribution and mean and variance from p.g.f.	https://youtu.be/krgZHqFMf_A
93	Poisson as a limiting case of binomial (Theorem)	https://youtu.be/PA40hRWYANY
94	Recurrence relation, additive property and problems on Poisson	https://youtu.be/GoaI73Sn3S4
95	Geometric distribution : definition, mean, variance, p.g.f.	https://youtu.be/v5NSWtyTa1E
96	Geometric distribution : c.d.f., recurrence relation, Properties	https://youtu.be/ezBSYOApd0E
97	Negative binomial distribution : definition, mean, variance.	https://youtu.be/H5uqpzzpBeQ
98	Negative binomial distribution: recurrence relation, Properties	https://youtu.be/gC_TR8e-SXg
Paper V Unit 1.2 Continuous Univariate distributions		
99	Univariate Continuous distribution I	https://youtu.be/3kTXBTi0WQw
100	Univariate Continuous distribution II	https://youtu.be/q3peZEuAF0U
101	Univariate Continuous distribution III	https://youtu.be/X2XOM8izhvc
102	Univariate Continuous distribution IV	https://youtu.be/gG8Pm4u2kIo
103	Univariate Continuous distribution V	https://youtu.be/u5eQnik4MHU
104	Univariate Continuous distribution VI	https://youtu.be/9J02dtNkP2I
105	Univariate Continuous distribution VII	https://youtu.be/ls1Xlyl0C3k

Paper VI Unit 1.1: Multiple Linear Regression		
106	Multiple linear regression I : (Introduction and Yule's notation)	https://youtu.be/TLf5vp-GGFk
107	Multiple linear regression II (Fitting of regression plane)	https://youtu.be/kJ6O3fxWGPI
108	Multiple linear regression III (Residual and properties of residual)	https://youtu.be/3bRfwQMHuTY
109	Multiple linear regression IV (Mean, Variance and covariance of the residual)	https://youtu.be/ZO4HJYcelrU
110	Multiple linear regression V (Problems)	https://youtu.be/XPGrh7tKdus
Paper VI Unit 1.1: Multiple and Partial Correlation		
111	Multiple and Partial Correlation I	https://youtu.be/Q1DdCG3UehE
112	Multiple and Partial Correlation II	https://youtu.be/GlW8d866YJg
113	Multiple and Partial Correlation III	https://youtu.be/vYyr0dmDh_o
114	Multiple and Partial Correlation IV	https://youtu.be/IHkXfvoAbYU
115	Multiple and Partial Correlation V	https://youtu.be/IkaAl9e2BEU
116	Multiple and Partial Correlation VI	https://youtu.be/_ZpOdUoMhB0
Paper VI Unit 1.2: Sampling Theory		
117	Population and Sample	https://youtu.be/X_cAyKeYnTg
118	Sampling Theory: Results on SRSWOR	https://youtu.be/UGdYBeJaRBM
119	Sampling Theory: Results on SRSWR	https://youtu.be/yI_YqGyqR34

B.Sc. II. (Sem. IV)
(Paper VII and VIII)

Sr. No.	Topic	YouTube Link
Paper VIII Unit 2.1 Testing of Hypothesis I		
120	Testing of Hypothesis I (Basic Concepts-I)	https://youtu.be/el3ugu-4wIM
121	Testing of Hypothesis II (Basic Concepts-II)	https://youtu.be/7nVDZlmG2fI
122	Testing of Hypothesis III (Basic Concepts-III)	https://youtu.be/3FjORy5KfVM
123	Testing of Hypothesis IV (Basic Concepts-IV)	https://youtu.be/rBjBgyAC9Zk
124	Testing of Hypothesis V (Basic Concepts-V)	https://youtu.be/YBsAkpAdAXk
125	Testing of Hypothesis VI (Test for population mean)	https://youtu.be/8zrgn6DX_8E
126	Testing of Hypothesis VII (Test for equality of two population means)	https://youtu.be/V_02At9MCgE
127	Testing of Hypothesis VIII (Test for population proportion)	https://youtu.be/JyKRqDjxXsE
128	Testing of Hypothesis IX (Test for equality of two population Proportions)	https://youtu.be/sj0DSh5HCJU
129	Testing of Hypothesis X (Test for population correlation)	https://youtu.be/_xBbLSHQNZU
Paper VIII Unit 2.2 Testing of Hypothesis II		
130	Testing of Hypothesis II (Part I) (Introduction of t, chi-square and F distribution)	https://youtu.be/YQbtdkZjKAs
131	Testing of Hypothesis II (Part II) (Small sample test for population mean)	https://youtu.be/9YISa04Y0rY
132	Testing of Hypothesis II (Part III) (Paired t test)	https://youtu.be/KV7X3cnUC1E
133	Testing of Hypothesis II (Part IV) (Test for population variance)	https://youtu.be/eGH0eK_1hK8
134	Testing of Hypothesis II (Part V) (Test for goodness of fit)	https://youtu.be/tB-gJIyqVjI
135	Testing of Hypothesis II (Part VI) (Test for independence of attributes)	https://youtu.be/17TGrstpMoc

136	Testing of Hypothesis II (Part VII) (Derivation of 2x2 contingency table)	https://youtu.be/hXEz_j1Qy-s
137	Testing of Hypothesis II (Part VIII) (Yates correction)	https://youtu.be/a-0mHI-rdm0
138	Testing of Hypothesis II (Part IX) (Test for equality of two population variances)	https://youtu.be/JGwJRkcqzxc
Paper VIII Unit 1.1 Statistical Quality Control		
139	Statistical Quality Control I	https://youtu.be/N2oMdxdVo2g
140	Statistical Quality Control II	https://youtu.be/TWnYQugUYrU
141	Statistical Quality Control III	https://youtu.be/nv3BKwqwzfM
142	Statistical Quality Control IV	https://youtu.be/gIIupohQcLM
143	Statistical Quality Control V	https://youtu.be/SgfDUUgrYVs
144	Statistical Quality Control VI	https://youtu.be/pLrVU0IWoyI
145	Statistical Quality Control VII	https://youtu.be/i-T1kDDdqSw
Paper VII Unit 1.1 Continuous Uniform and Exponential distribution		
146	Continuous Uniform distribution Part I	https://youtu.be/PUnEiIyaLj8
147	Continuous Uniform distribution Part II	https://youtu.be/LZKmp2adHGY
148	Continuous Uniform distribution Part III	https://youtu.be/-TMZa87GRcs
149	Exponential distribution Part I	https://youtu.be/UZ6BVrOrI6Q
150	Exponential distribution Part II	https://youtu.be/30EH6z0gjlM
151	Exponential distribution Part III	https://youtu.be/EWlHZRLurhw
Paper VII Unit 1.2 Gamma and Beta distribution		
152	Overview of Gamma and Beta distribution	https://youtu.be/1nWVvnq2Mno
Paper VII Unit 2.1 Normal distribution		
153	Normal distribution I	https://youtu.be/5f5ZI5ciWec

154	Normal distribution II	https://youtu.be/3cqmdbF7TNc
155	Normal distribution III	https://youtu.be/1513UmjU9Jo
156	Normal Distribution IV	https://youtu.be/c4eZZvutCaQ
157	Normal Distribution V	https://youtu.be/BXghBW3KgM4
Paper VII Unit 2.2 Exact Sampling distribution (Chi-square, t and F)		
158	Chi-square Distribution I	https://youtu.be/dOKlxw595AQ
159	Chi-square Distribution II	https://youtu.be/-HTn1u41Cu8
160	Chi-square Distribution III	https://youtu.be/KBjYkkkBbkg
161	t – Distribution I	https://youtu.be/VGX9LdgXiI8
162	t – Distribution II	https://youtu.be/sLx6LUUSk-s
163	t – Distribution III	https://youtu.be/KQpldUsRIrk
164	F – distribution I	https://youtu.be/ujG12kTxNCo
165	F – distribution II	https://youtu.be/s8Vd-zQkaqc