Bharatiya Vidya Bhavan

Academic Organiser 2016-17

Department of Mathematics & Statistics

B.Sc. I year Semister I

Subject: Discriptive Statistics & Probability   Paper code: ST121

Month	Sub Units	Topics to be covered	No.of classes per topic
		UNIT II	
J U L Y	1	Introduction of Statistics	1
	2	Measures of Central Tendency	7
	3	Measures of dispersion	5
	4	Moments and their inter relation	3
	5	Skewness, Kurtosis & Sheppard's correction	2
		UNIT III	
A U G U S T	1	Introduction to Probability and basic concepts of probability	2
	2	Simple theorems on Probability	2
	3	Addition theorem for 2 and n events	1
	4	Conditional Probability	2
	5	Multiplication theorem for 2 and n events	1
	6	Simple problems	3
	7	Baye's theorem	2
	8	Boole's inequality	1
		UNIT IV	
S E P T E M B E R	1	Definition of r.v. and types of r.v.	1
	2	Properties of distribuition function	1
	3	Functions of r.v.	1
	4	transformation of r.v.s	3
	5	Mathematical Expectations introduction	1
	6	Properties of mathematical expectations	2
	7	Properties of variances	2
	8	M.G.F. and its properties	1
	9	P.G.F. and its properties	1
	10	C.F. and its properties	1
	11	C.G.F. and its properties	1
	12	Tscheby chev's inequality	3
O C T O B E R	1	Cauchy Schwartz inequality	1
		UNIT I	
	2	Types of collection of data	2
	3	Concept of Population and sample, quantitative and qualitative data	2
	4	Questionnaire and Schedule	1
	5	Tabulation and Classification	1
	6	Univariate and bivariate Frequency distribution	2
	7	Measurement of scales	1
	8	Diagrammatic and Graphical presentation	2
	9	Revision	3
TOTAL			65

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Academic Organiser 2016-17

Department of Mathematics & Statistics

B.Sc. I year Semister II

Subject: Probability distributions   Paper code: ST122

Month		Topics to be covered	No.of classes per topic
		UNIT I	
	1	Introdution to bivariate r.v. and notations	2
	2	Joint marginal and conditional distributions	2
	3	independence of random variables	1
DECEMBER	4	Statement and applications of W.L.L.N.	2
	5	C.L.T. for i.i.d. r.v.s with finite variance	3
		UNIT II	
	6	Discrete Uniform distriubtion	1
	7	Bernouli distribution	1
	8	Binomial distribution	4
		UNIT II	
	1	Poisson distribution	5
JANUARY	2	Negative Binomial distribution	3
	3	Geometric distribution	3
	4	Hyper geometric distribuiton	2
		UNIT III	
	1	Rectangular distribution	3
	2	Normal distribution	9
FEBRUARY		UNIT IV	
	3	Exponential distribution	3
	4	Gamma distribution of first kind	2
		UNIT IV	
	1	Gamma distribution of first kind	1
	2	Gamma distribution of second kind	3
MARCH	3	Beta distribution of first kind	2
	4	Beta distribution of second kind	2
	5	Cauchy distribution	4
	6	Revision	2
TOTAL			60

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Academic Organiser 2016-17
Department of Mathematics & Statistics
B.Sc. II year Semister III

Subject: Statistical Inference - I   Paper code: ST221

Month	No.of teaching days	Topics to be covered	No.of classes per topic
JUNE	14	**Unit I**	
		Fitting of Curves	5
		Theory of Attributes	9
JULY	16	**Unit II**	
		Correlation Coefficient	5
		Coefficient of determination	1
		Rank Correlation Coefficient	3
		Regression Analysis	7
AUGUST	16	**Unit III**	
		Basic concepts of sampling distribution	2
		Exact sampling distributions - t, F, χ^2	4
		Relation b/w t & F and F & χ^2 distribution	2
		Theory of Estimatin basic definitions	2
		Unbiasedness and Consistency	6
SEPTEMBER	14	**Unit IV**	
		Efficiency, Sufficiency and Neyman's Factorization Theorem	4
		Methods of Estimation: MLE and MM	7
		Point Estimation, Interval Estimation and Confidence Limits	3
TOTAL	**60**		**60**

Subject: Staistical Inference - II   Paper code: ST222

Month	No.of teaching days	Topics to be covered	No.of classes per topic
November	15	UNIT - I	
		Testing of hypothesis (Concept)	5
		NP lemma Theorem and its applications	10
December	14	UNIT - II	
		Large Sample Tests	14
January	16	UNIT - III	
		Small Sample Tests	14
		Order Statistics	2
February	15	UNIT - IV	
		Non parametric Tests	15
TOTAL	60		60

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Academic Organiser 2016-17
Department of Mathematics & Statistics
B.Sc. III year
Subject: Applied statistics - I

Month	No.of teaching days	Topics to be covered	No.of classes per topic
June	12	**Unit II** Introduction of ANOVA, ANOVA for one-way and two way classification D.O.E., C.R.D.	1 11
July	14	**Unit II** RBD, LSD. **Unit I** Introduction of Sample Survey Principles of Sample Survey Sampling and Non Sampling Errors methods of sampling	8 1 1 2 2
August	15	**Unit I** Estimation of Mean, Proportion and their variances using S.R.S., St.R.S., Sys.R.S.	15
September	12	**Unit I** Comparison of relative efficiency **Unit III** Time Series and its components Determination of trend by Least Square and Moving Averages Method Growth curves	4 1 4 3
October	1	**Unit III** Determination of seasonal Indices by Semi Averages and Ratio to trend method	1
November	14	**Unit III** Determination of Seasonal Indices by Ratio to Moving Averages and L.R. method. Index Numbers Indian Official Statistics	4 9 1
December	14	**Unit IV** Vital Statistics Introduction and Sources of Demand Analysis	10 4
January	8	**Unit IV** Demand Analysis	8
Total	90		90

BHAVAN'S VIVEKANANDA COLLEGE OF SCIENCE, HUMANITIES AND COMMERCE

(Accredited with A grade by NAAC)

Autonomous College - Affiliated to Osmania University

Department of Statistics

Academic planner 2016-17

Paper IV- Quality, Reliability and OR @ 3 hrs per week

Month	No. of Possible Teaching days	Topics to be covered	No. of classes Per topic	Remarks
June	12	**Unit III** Introduction of OR Formulation of LPP Graphical Solution to an LPP Simplex Method Big M Method	1 2 2 4 3	
July	14	Two Phase Method Duality **Unit IV** Transportation Problem	6 4 4	
August	15	Transportation Problem Assignment Problem Maximization of AP	8 5 2	
September	12	Travelling Salesman Problem Sequencing Problem n Jobs 2 Machines & 3 Machines	3 3 6	
October	1	**Unit I** SQC- Introduction	1	
November	14	Process Control Chart Xbar, SD, R Chart No. of defective Chart (d Chart) Fraction defective Chart (p Chart)	2 8 2 2	
December	14	No. of defects Chart (C and U Chart) **Unit II** Acceptance Sampling Plan Single Sampling Plan	2 4 8	
January	8	Double Sampling Plan Reliability Theory	5 3	
Total	90		90	