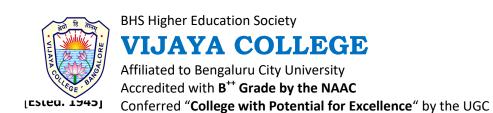


ACADEMIC YEAR/SEMESTER			2023-24	1 Ser	nester B.Sc	
DEPART	MENT	STATISTICS				
SUBJECT	Г/РАРІ	S101 – Desci	riptive	Statistics		
	MONTH -1					
WEEK	DAY	PORTIONS PLA	ANNED FOR 1 HO	UR	FACULTY	
	1	Definition and scop	e of Statistics		N V P	
	2	Various definitions	of Statistics		N V P	
1	3	Statistics in Singula	r & Plural sense		N V P	
	4	Concept of Populati	on and Samples		NVP	
	1	Sampling technique	es		N V P	
2	2	Method of drawing Finite and Infinite p	1	om	NVP	
2	3	Simple, Stratified, S sampling	<u> </u>	ster	NVP	
	4	Measures of Central Te	endency:		RP	
	1	Types of data, data	collection methods		N V P	
3	2	Classification, Sign	ificance and types		N V P	
	3	Mean, weighted mean,	trimmed mean,		RP	
	4	Median, Mode,			RP	
	1	Tabulation, types of table and table with		blank	N V P	
4	2	Frequency distributed definition and types			N V P	
	3	Geometric and harmon and limitations, relation			RP	



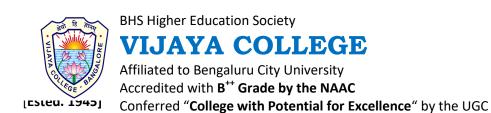
	4	do	RP
TEST 1			

MONTH -2					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY		
	1	Construction of Univariate frequency distribution.	N V P		
1	2	Construction of Bivariate frequency distribution, Marginal and Conditional distributions.	NVP		
	3	Partition values	RP		
	4	do	RP		
	1	Cumulative frequency distributions	N V P		
2	2	Graphical representation – Histogram, Frequency Polygon	N V P		
	3	Measures of Dispersion: Range, Quartile deviation,	RP		
	4	Mean deviation,	RP		
	1	Graphical representation – Histogram, Frequency Curve, Ogives.	N V P		
3	2	Graphical location of Mode, Partition values.	N V P		
	3	Standard deviation and their relative measures.	RP		
	4	do	RP		
	1	Bivariate data and Introduction to Correlation analysis	N V P		
4	2	Karl Pearson's coefficient of Correlation (r) and interpretation.	N V P		
	3	Moments, Skewness and Kurtosis. Quantiles and measures based on them.	RP		
	4	Do	RP		



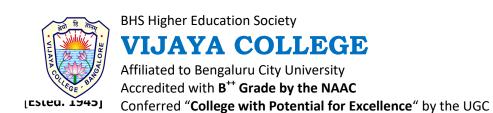
	MONTH -2					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY			
TES	Т 2					

	MONTH -3					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY			
	1	Properties of r, definition and derivation	NVP			
1	2	Spearman's Rank correlation (ρ), need significance.	NVP			
	3	Box Plot.	RP			
	4	Analysis of Categorical Data: Contingency table,	RP			
2	1	Properties of ρ, significance and need	NVP			
	2	Method of least squares, significance and need	NVP			
	3	independence and association of attributes,	RP			
	4	measures of association - odds ratio, Pearson's and Yule's measure.	RP			
	1	Fitting a straight line or linear trend equation	NVP			
3	2	Fitting a Non-linear trend equation	NVP			
J	3	Multiple linear regression (Three Variables only),	RP			
	4	Residual variance. Multiple and partial correlation coefficients.	RP			
4	1	Fitting of Exponential trend equations	NVP			



	MONTH -3					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY			
	2	Linear Regression analysis, need and significance	NVP			
	3	Residual variance.	RP			
	4	Multiple and partial correlation coefficients.	RP			

	MONTH - 4					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY			
	1	Regression coefficients, properties	N V P			
1	2	Regression lines or equations, properties	N V P			
	3	Multiple and partial correlation coefficients.	RP			
	4	Revision	RP			
	1	Angle between two regression lines and interpretation.	NVP			
2	2	Coefficient of determination	N V P			
	3	Revision	RP			
	4	Revision	RP			



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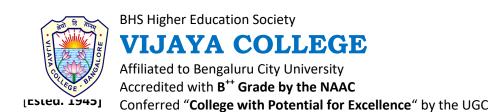
MONTH - 4					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY		
3	1	Linear Correlation and Regression analysis of Bivariate data.	NVP		

ACADEMIC YEAR/SEMESTER			2023-24	BDA			
DEPARTMENT			STATISTICS				
SUBJECT	Г/РАРІ	ER	BUSINESS STAT	ISTICS – I			
	MONTH -1						
WEEK	DAY	PORTIONS PLA	ANNED FOR 1 HOUR	FACULTY			
	1	Introduction to Star	tistics	N V P			
	2	Various definitions	and examples	N V P			
1	3	DECOVA frame we	N V P				
	4	Primary and Second	NVP				
	1	Census vs Sampling	ΝVΡ				
2	2	Types of sampling a	N V P				
2	3	Classification – sign	N V P				
	4	Tabulation – type o	f tables	ΝVΡ			
	1	Problems on Tabula	ntion	N V P			
3	2	Construction of blan	nk tables	N V P			
	3	Construction of table	les with numerical values	N V P			
	4	Construction of tables with numerical values		NVP			
4	1	Frequency distribut	ion – types, significance	N V P			



	2	Construction of Univariate frequency distribution	N V P
	3	Discrete and continuous frequency distributions	N V P
	4	Frequency density, Relative frequency	NVP
TEST	1		

MONTH -2					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY		
	1	Bivariate frequency distribution	N V P		
1	2	Marginal frequency distributions	N V P		
	3	Conditional frequency distribution	NVP		
	4	Problems on frequency distributions	NVP		
	1	One dimensional diagram	NVP		
2	2	Simple bar diagrams	N V P		
2	3	Subdivided bar diagrams	N V P		
	4	Introduction to probability	R P		
	1	Percentage bar diagrams	NVP		
2	2	Multiple and Deviation bars	NVP		
3	3	Pie diagrams	N V P		
	4	Various definitions and examples relating to probability	R P		
4	1	Central tendency – Arithmetic Mean	NVP		
+	2	Combined Mean, Properties of AM	NVP		



	MONTH -2					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY			
	3	Geometric Mean, problems	N V P			
	4	Set theory – Introduction, types and operations	R P			
TEST 2						

MONTH -3				
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY	
	1	Median, properties and problems	N V P	
1	2	Mode, properties and problems	N V P	
_	3	Partition values – Quartiles	N V P	
	4	Problems on probability	R P	
	1	Partition values – Deciles	ΝVΡ	
0	2	Partition values – Percentiles	N V P	
2	3	Measures of dispersion – Mean deviation	N V P	
	4	Problems on definition of probability	R P	
	1	Quartile deviation	N V P	
3	2	Standard deviation	N V P	
	3	Coefficient of variation	N V P	



	MONTH -3				
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY		
	4	Addition theorem on probability (ME events)	R P		
	1	Skewness – Definition and types	ΝVΡ		
	2	Karl pearson's coefficient of skewness	N V P		
4	3	Bowley's coefficient of skewness	N V P		
	4	Addition theorem on probability (Non ME events)	R P		

MONTH -3				
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY	
	1	Median, properties and problems	N V P	
1	2	Mode, properties and problems	N V P	
	3	Partition values – Quartiles	N V P	
	4	Problems on Addition theorem	R P	
	1	Partition values – Deciles	N V P	
2	2	Partition values – Percentiles	N V P	
4	3	Measures of dispersion – Mean deviation	N V P	
	4	Problems on Addition theorem continued	R P	
	1	Quartile deviation	N V P	
3	2	Standard deviation	N V P	
	3	Coefficient of variation	N V P	



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	MONTH -3				
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY		
	4	Problems on Addition theorem continued	R P		
	1	Skewness – Definition and types	NVP		
4	2	Karl pearson's coefficient of skewness	NVP		
4	3	Bowley's coefficient of skewness	NVP		
	4	Problems on Probability	R P		

MONTH -3				
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY	
	1	Correlattion – types, Significance, Scatter diagram	NVP	
1	2	Karl Pearson'd coefficient of correlation	NVP	
	3	Properties of correlation coefficient	N V P	
	4	Revision on Probability	R P	
	1	Correlation for Bivariate data	NVP	
2	2	Revision of previous year question papers	NVP	
	3	Revision of previous year question papers	NVP	
	4	Revision of previous year question papers	R P	

ACADEMIC YEAR/SEMESTER	2023-24 IIIsem B.sc	
DEPARTMENT	STATISTICS	
SUBJECT/PAPER	STATISTICS/STATISTICAL	



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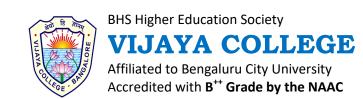
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		MONTH -1		
WEEK	YEEK DAY PORTIONS PLANNED FOR 1 HOUR			
OCTOBER 2023	1	Discrete distributions: Negative Binomial -definition through probability mass function, mean, variance, moments, m.g.f., other properties and applications.	R P	
classes begin from 09/10/2023	2	Negative Binomial -definition through probability mass function, mean, variance, moments, m.g.f., other properties and applications.	R P	
1	3	Continuity and Differentiability, introduction to partial derivatives, Jacobain.	ΝVΡ	
	4	Test for convergence of Sequences	ΝVΡ	
	1	Negative Binomial -definition through probability mass function, mean, variance, moments, m.g.f., other properties and applications.	R P	
2	2	Hypergeometric, -definition through probability mass function, mean, variance, moments, m.g.f., other properties and applications.	R P	
	3	Test for convergence of sequences	N V P	
	4	Test for convergence of Series	N V P	
	1	Hypergeometric, -definition through probability mass function, mean, variance, moments, m.g.f., other properties and applications.	R P	
3	2	Hypergeometric, -definition through probability mass function, mean, variance, moments, m.g.f., other properties and applications.	R P	
	3	Test for convergence of series	ΝVΡ	
	4	Test for convergence of Series		
NOV- 2023	1	Definitions of random sample, parameter and statistic, sampling distribution of sample mean, standard error of sample mean, sampling distribution of sample variance, standard error of sample variance.	R P	
	2	Definitions of random sample, parameter and statistic, sampling distribution of sample mean, standard error of	R P	



		sample mean, sampling distribution of sample variance, standard error of sample variance	
	3	Marginal and Conditional distributions	ΝVΡ
	4	Problems on Marginal and conditional distributions	ΝVΡ
TEST	1		

MONTH -2				
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY	
	1	Definitions of random sample, parameter and statistic, sampling distribution of sample mean, standard error of sample mean, sampling distribution of sample variance, standard error of sample variance	R P	
2	2	Exact sampling distributions : Chi square distributionmean, variance, moments, mode, additive property.	R P	
	3	Conditional expectation definitions, related theorems	ΝVΡ	
	4	Moments and Correlation	ΝVΡ	
	1	Chi square distribution- mean, variance, moments, mode, additive property.	R P	
3	2	Student's and Fisher's t-distribution- mean, variance, moments and limiting form of t distribution	R P	
	3	Distribution function of random variable	R P	
	4	Transformation of variable techniques	ΝVΡ	
	1	Student's and Fisher's t-distribution- mean, variance, moments and limiting form of t distribution	ΝVΡ	
4	2	Student's and Fisher's t-distribution- mean, variance, moments and limiting form of t distribution	PR	
	3	Transformation of variable techniques, continued	ΝVΡ	



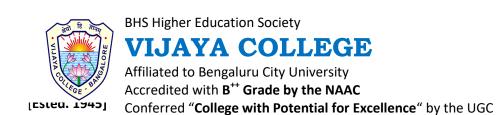
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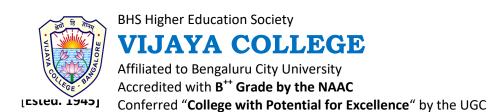
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WEEK	DAY	FACULTY	
	4	Chebyschev's inequality statement and proof	ΝVΡ
	1	Snedecor's F-distribution: mean, variance and mode. Distribution of 1/F.	R P
DEC- 2023	2	Introduction to simulation. Generation of random observations from Uniform, Exponential, Normal, Binomial, Poisson distributions	R P
	3	Significance of Chebyschev's inequality and its applications	ΝVΡ
	4	Weak law of large numbers	ΝVΡ

MONTH -3					
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY		
	1	Generation of random observations from Uniform, Exponential, Normal, Binomial, Poisson distributions	R P		
2	2	Generation of random observations from Uniform, Exponential, Normal, Binomial, Poisson distributions	R P		
	3	Convergence in Law	N V P		
	4	Central Limit theorem introduction	N V P		
	1	DeMoivre's Central limit theorem	NVP		
3	2	Significance of Central limit theorem and its uses	NVP		
	3	Discussion of Model question papers	R P		
	4	Revision of previous year question papers	NVP		
4	1	Revision of previous year question papers	N VP		
T	2	Revision of previous year question papers	R P		



ACADEM	IC YEA	AR/SEMESTER	2023-24	FIFTH		
DEPART	MENT		STATISTICS, Paper 6			
SUBJECT	ſ/PAPI	ER	Statistical Quality Control &			
			Statistical	Inference – II		
		MON'	TH -1			
WEEK	DAY	PORTIONS PI	ANNED FOR 1 HO	UR FACULTY		
	1	Introduction to SQC	,	NVP		
•	2	Aims, Objectives an	d Significance	NVP		
1	3	Chance vs Assignab	le causes	N V P		
	4			R P		
	1	Process vs Product of	control	NVP		
2	2	Control charts, types	s, significance	NVP		
2	3 X bar and R chart (constant sample size) Process standards known and unknown) NVP		
	4	Unit-3: Testing of Hyp	R P			
	1	X bar and R chart (V Process standards kn	_) NVP		
3	2	chart)	p chart (Constant sample size and Stabilized			
	3	np chart (Process statunknown)		N V P		
	4	Definition of UMP test, (MLR) property,	monotone likelihood i	ratio R P		
	1	c chart (Process star	dards known and ur	nknown) NVP		
4	2	u chart (Process star	dards known and ur	nknown) NVP		
	3	Statistical background Warning and Action		N V P		



	4	Examples of distributions having MLR property,.	R P
TEST	1		

MONTH -2			
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY
1	1	Process Capability Analysis (PCA)	NVP
	2	Process Capability Ratio (PCR) and its interpretation	NVP
	3	Natural tolerance limits and Specification limits	NVP
	4	Examples of distributions having MLR property,	R P
	1	Sampling Plans, need, significance	N V P
2	2	Single Sampling Plans (SSP), definition and operation	NVP
	3	Various parameters of SSP	NVP
	4	Construction of UMP test using MLR property	R P
2	1	SSP for attributes	NVP
	2	Derivation of OC, AOQ of SSP and problems	NVP
3	3	Derivation of ASN, ATI of SSP and problems	NVP
	4	UMP test for single parameter exponential family of distributions.	R P
	1	Plotting of OC, AOQ, AOQL, ASN, ATI for SSP	N V P
4	2	Non parametric or distribution free tests, Significance, advantages and demerits.	NVP
	3	One sample tests – Sign test, Signed Rank test	NVP
	4	UMP test for single parameter exponential family of distributions.	R P
TES	T 2		ı



MONTH -3 WEEK DAY PORTIONS PLANNED FOR 1 HOUR **FACULTY** ΝVΡ 1 Test for Randomness (Run test) 2 ΝVΡ Kolmogrov – Smirnov test 1 3 NVPTwo sample tests – Wald Wolfowitz run test RΡ 4 Likelihood ratio (LR)tests, LR test for normal 1 NVPMann-Whitney U test 2 NVPFriedman's H test 2 3 NVPKruskal – Walli's test 4 RΡ Likelihood ratio (LR)tests, LR test for normal, exponential ΝVΡ 1 Revision of previous year QPs 2 NVPRevision of previous year QPs 3 3 RΡ Revision of previous year QPs 4 Revision of previous year QPs RΡ

ACADEMIC YEAR/SEMESTER	2023-24	
DEPARTMENT	STATISTICS	
SUBJECT/PAPER	Sampling Theory a	and Regression analysis (Theory)

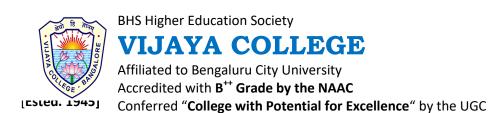


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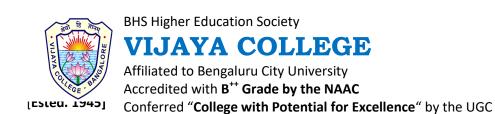
MONTH -1

OCTOBER-2023

		T	
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY
OCTOBER	1	Unit 1: Int. To sampling, basic concepts	R P
2023	2	Unit 2; SRS WR & WOR, basics	R P
(classes begin from	3	UEs of mean	R P
09/10/2023	4	UE of total.	R P
1			
	1	Sampling Vs Complete enumeration	R P
0	2	Derivation of sampling variances	R P
2	3	Sampling variance continued	R P
	4	Sample size derivation.	R P
3	1	Principal steps in a survey.	R P
	2	Advs. & drawbacks of SRS	R P
J	3	Unit3: stratified sampling, need	R P
	4	Sampling and non-sampling errors	R P
	1	Advs. & limitations	R P
	2	UE of population mean	R P
NOV- 2023	3	UE of population total	R P
	4	CI	R P



WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY
	1	Variance estr. derivation	R P
2	2	Var. Estr. derv, continued	R P
_	3	Proportional allocation	R P
	4	optimum allocation	R P
	1	Neyman allocation	R P
	2	Comparison & gain in precision	RP
3	3	Systematic Sampling: Linear systematic sampling Technique; estimates of population mean and total, variances of these estimates (N=n x k).	R P
	4	do	R P
	1	Comparison of systematic sampling with SRS and stratified sampling in the presence of linear trend and corrections	R P
	2	do	R P
4	3	Merits and demerits of Systematic Sampling	R P
	4	Unit 4: Simple linear regression: Assumptions, inference related to regression parameters, standard error of prediction	R P
DEC- 2023	1	tests on intercepts and slopes, extrapolation, diagnostic checks and correction: graphical techniques,	R P
	2	tests for normality, uncorrelatedness, homoscedasticity, lack-of-fit testing,	R P



WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY
	3		R P
	4	do	R P
TES	T 2		ı

	MONTH -3				
WEEK	DAY	PORTIONS PLANNED FOR 1 HOUR	FACULTY		
	1	transformations on Y or X (Box-Cox, square root, log etc.), method of weighted least squares, inverse regression.	R P		
2	2	Do	R P		
	3	Do	R P		
	4	Revision	R P		
	1	Revision	R P		
3	2	Revision	R P		
3	3	Revision	R P		
	4	Revision	R P		
	1	Revision	R P		
4	2	Revision	R P		
	3	Revision	R P		