SRI KRISHNADEVARAY UNIVERSITY:: ANANTAPURAMU

UG CBCS SYLLABUS
VI Semester
(2017-2018)

STATISTICS

VI SEMESTER- SYLLABUS

(Non-Mathematics Combinations)

(AS PER CBCS AND SEMESTER SYSTEM)

III YEARS

w.e.f. 2017-2018

AP STATE COUNCIL OF HIGHER EDUCATION
CBCS - PATTERN FOR STATISTICS

SRI KRISHNADEVARAYA UNIVERSITY: ANANTAPURAM
CBCS SCHEME OF EXAMINATION
STATISTICS SYLLABUS (SEMESTER WISE)
WITH EFFECT FROM THE ACADEMIC YEAR 2017-18
(Non Maths combination)

Semester	Paper	Subject	Hrs.	Credits	IA	ES	Total
FIRST YEAR							
Semester I	Paper-I	Elementary Mathematics	6	4	25	75	100
Semester II	Paper-II	Descriptive Statistics	6	4	25	75	100
SECOND YEAR							
Semester III	Paper-III	Statistical Methods - I	6	4	25	75	100
Semester IV	Paper-IV	Statistical Methods - II	6	4	25	75	100
THIRD YEAR							
Semester V	Paper-V	Statistical Applications – I	5	4	25	75	100
	Paper-VI	Statistical Applications - II	5	4	25	75	100
Semester VI	ELECTIVE PAPERS						
	Elective-I-Paper VII(A)	Sampling Techiniques	5	4	25	75	100
	(or)						
	Elective-II-Paper VII(A)	Demography & vital Statistics	5	4	25	75	100
	CLUSTER PAPERS						
	Cluster-1-P-VIII-(A-1)	Design of Experiments & Official Statistics	5	4	25	75	100
	Cluster-1-P-VIII-(A-2)	Statistical data Analysis Through MS Excel	5	4	25	75	100
	Cluster-1-P-VIII-(A-3)	project	5	4	25	75	100
	(or)						
	Cluster-2-P-VIII-(B-1)	Operations Research	5	4	25	75	100
	Cluster-2-P-VIII-(B-2)	Optimization Techniques	5	4	25	75	100
	Cluster-2-P-VIII-(B-3)	Project	5	4	25	75	100

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ELECTIVE PAPERS

YEAR	SEMESTER	PAPER	TITLE OF PAPER	MARKS	WEEKLY WORK LOAD
III YEAR	Select either Elective I (or) Elective II	VII(A) Elective	Sampling Techiniques	75+25=100	3Hrs
		VII(A) Practical	Sampling Techiniques (Practical)	25+25=50	2Hrs
		(or)			
		VII(B) Elective	Demography & vital Statistics	75+25=100	3Hrs
		VII(B) Practical	Demography & vital Statistics (Practical)	25+25=50	2Hrs

CLUSTER ELECTIVES

Year	Semester	Paper	Title of Paper	Marks	Weekly work load
III YEAR	Select either Cluster –I (or) Cluster-II	Cluster-I			
		VIII(A-1)	Statistical data Analysis Through MS Excel	75+25=100 25+25=50	3HrsTheory +2HrsPractical
		VIII(A-2)	Design of Experiments Official Statistics &	75+25=100 25+25=50	3HrsTheory +2HrsPractical
		VIII(A-3)	Project	75+25=100	5Hrs
		(or)			
		Cluster-II			
		VIII(B-1)	Operations Research(75+25) + Practical(25+25)	75+25=100 25+25=50	3HrsTheory +2HrsPractical
		VIII(B-2)	Optimization Techniques + Practical(25+25)	75+25=100 25+25=50	3HrsTheory +2HrsPractical
		VIII(B-3)	Project	75+25=100	5Hrs

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Instruction to the Question Paper setter

The question paper setter is required to follow the instructions mentioned below.

- From Section A 10 questions have to be given out of which 5 questions have to be answered by the student choosing atleast one question from each unit
- From Section B questions of the type A or B should be ask from each unit.
- Questions should be given according to the following manner.

Max. Marks: 75

	SECTION-A	SECTION-B
UNIT-I	1 Question	1 Question
UNIT- II	1 Question	1 Question
UNIT- III	1 Questions	1 Question
UNIT –IV	1 Question	1 Question
UNIT – V	1 Questions	1 Question
Total Questions to be given	10 Questions	5 Questions
Total Questions to be Answered	5 Questions	5 Questions
Marks	5X5m= 25M	5X10m=50M

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SRI KRISHNA DEVAYARA UNIVERSITY : ANANTAPURAM
CBCS SYLLABUS (Semester wise) 2017-18
BA/BSC III YEAR : STATISTICS SYLLABUS

(For Non - Mathematics Combination)

Semester – VI **ELECTIVE-I**

Paper – VII (A) Sampling Techniques

Unit – I

Sampling versus census, sample survey meaning, sampling and Non- Sampling errors, Limitations of sampling.

Unit – II

Principal steps in a sample survey, Types of Sampling.

Unit – III

Simple Random Sampling Without Replacement (SRSWOR), Random number table method and lottery system. Sample mean is an unbiased estimate of population mean.

Unit – IV

Meaning of stratified random sampling, merits & demerits. Definitions of proportional and Optimum allocations.

Unit – V

Proof var $(y_n)_{ran} \geq$ var $(y_{st})_{prop} \geq var(y_{st})_{opt}$. Definition of systematic random sampling. Comparison of SRSWOR, stratified and systematic samplings.

Practicals – Semester -V

1. Estimation of population mean, total, variance in case of SRSWOR.
2. Comparison of SRSWOR with optimum and proportional allocations.
3. Comparison of SRSWOR, stratified and systematic samplings.

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CBCS SYLLABUS (Semester wise) 2017-18
BA/BSC III YEAR: STATISTICS SYLLABUS
(Non Mathematics Combination)

Semester – VI **Elective - II**

Paper – VII (B) **Demography & vital Statistics**

UNIT I

Population Theories: Coverage and content errors in demographic data, use of balancing equations and Chandrasekharan-Deming formula to check completeness of registration data. Adjustment of age data, use of Myer and UN indices, Population composition, dependency ratio.

UNIT II

Introduction and sources of collecting data on vital statistics, errors in census and registration data. Measurement of population, rate and ratio of vital events. Measurements of Mortality: Crude Death Rate (CDR), Specific Death Rate (SDR), Infant Mortality, Rate (IMR) and Standardized Death Rates.

UNIT III

Stationary and Stable population, Central Mortality Rates and Force of Mortality. Life (Mortality) Tables: Assumption, description, construction of Life Tables and Uses of Life Tables.

UNIT IV

Abridged Life Tables; Concept and construction of abridged life tables by Reed-Merrell method, Greville's method and King's Method. Measurements of Fertility: Crude Birth Rate (CBR), General Fertility Rate (GFR), Specific Fertility Rate (SFR) and Total Fertility Rate (TFR).

UNIT-V

Measurement of Population Growth: Crude rates of natural increase, Pearl's Vital Index, Gross Reproduction Rate (GRR) and Net Reproduction Rate (NRR).

SUGGESTED READING:

1. Mukhopadhyay P. (1999): Applied Statistics, Books and Allied (P) Ltd.
2. Gun, A.M., Gupta, M.K. and Dasgupta, B. (2008): Fundamentals of Statistics, Vol. II, 9th Edition, World Press.
3. Biswas, S. (1988): Stochastic Processes in Demography & Application, Wiley Eastern Ltd.
4. Croxton, Fredrick E., Cowden, Dudley J. and Klein, S. (1973): Applied General Statistics, 3rd Edition. Prentice Hall of India Pvt. Ltd.
5. Keyfitz N., Beckman John A.: Demogrphy through Problems S-Verlag New york.

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CBCS SYLLABUS (Semester wise) 2017-18
BA/BSC III YEAR : STATISTICS SYLLABUS
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Semester – VI CLUSTER-I

Paper – VIII(A1): Design of Experiments and Official Statistics

Unit – I

Cluster sampling, two stage with equal no. of clusters.

Unit – II

National income, methods to estimate national income, functions & organization of CSO & NSSO.

Unit – III

Analysis of variance – meaning, definition, assumptions. One way and Two way classifications.

Unit - IV

Principles of design of experiments, Completely Randomized Design, Randomized Block Design, and Latin Square Design.

Unit – V

Factorial experiments - 2^2(Two square) and 2^3 (Two Cubed) factorial experiments.

Reference Books:

1. Anuvarthita Sankyaka Sastram – Telugu Academy.
2. Applied statistics – V.K. Kapoor and S.C. Gupta.
3. Fundamentals of statistics – Goon, Gupta and Das Gupta.
4. Applied statistics – Parimal Mukhopadyaya.
5. Statistical methods – S.P. Gupta.

Practicals – Semester - VI

1. ANOVA – One way and Two way classifications.
2. CRD, RBD, LSD.
3. 2^2 and 2^3 factorial experiment

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CBCS SYLLABUS (Semester wise) 2017-18
BA/BSC III YEAR : STATISTICS SYLLABUS

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Semester – VI **CLUSTER-I**

Paper-VIII (A2): STATISTICAL DATA ANALYSIS THROUGH MS EXCEL

UNIT – I

Graphical Representation of data: Simple, multiple, and subdivided bar diagrams, Histogram, Frequency Curve, Frequency Polygon, Ogive Curves and Pie diagram by using MS Excel.

UNIT - II

Measures of Central tendencies- Mean, Median and Mode, Measures of dispersion-range, Quartile deviation, Standard deviation, mean deviation, variance and covariance by using MS Excel

UNIT – III

Fitting of discrete probability distributions- Binomial and Poisson distribution and fitting of continuous probability distributions-Exponential and Normal distributions by using MS Excel. Presentation of Scatter diagram, Computation of Correlation Coefficient, Regression Coefficients Variance and Covariance matrix using MS Excel.

UNIT - IV

Statistical Inference:- t, F and Chi square tests based on small samples, Testing of hypothesis based on large samples ,Z-Tests- Test for single mean, difference of means, single proportion, difference of proportions and correlation coefficients,

Unit-V

Anova –One way and two way, CRD, RBD and LSD by using MS Excel

TEXT BOOKS

1. STATISTICS MADE SIMPLE, Do it yourself on PC by KVS SARMA
2. P.C. Software and Programming by Guruvinder Singh Rachpal Singh

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