Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD.

B.Sc. Ist Year

Statistics practical paper I

Paper 3

Time : 3 hrs **Max marks – 100**

		Marks.
1)	Record Book	10
2)	Viva voce	10
3)	Question paper	80
	Total	100

Question Paper .

All questions are compulsory.

Q.1 Marks–20.

Problems based on practical nos.1, 2, 3. 4

Q.2 Marks – 30

Problems based on practical nos.,5,6.7

Q.3 Marks – 30.

Problems based on practical nos.,8,9,10.

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Statistics practical paper II

Paper 4

Time : 3 hrs Max marks – 100

		Marks.
1)	Record Book	10
2)	Viva voce	10
3)	Question paper	80
	Total	100

Question Paper .

All questions are compulsory.

Q.1 Marks – 30.

Problems based on practical nos.1,2,3,4

Q.2 Marks – 30

Problems based on practical nos. 5,6,7,8

Q.3 Marks – 20.

Problems based on practical nos. 9,10. 11

Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD.

B.Sc.-I Year (STATISTICS)

List of Practicals

Practical paper I

Paper –3 (Practicals based on paper 1)

1) Problems based on Probabilities.
2) Evaluation of probabilities using Addition and Multiplication Theorems.
3) Problems on Conditional Probability.
4) Problems on Baye's Theorem.
5) Problems on Mathematical Expectation and its properties.
6) Computation of Measures of central tendency, Dispersion using Mathematical Expectation.
7) Skewness and kurtosis of univariate probability distributions.
8) Fitting of Binomial Distribution.
9) Fitting of Poisson Distribution.
10) Fitting of Negative Binomial Distribution.

Practical paper II

List of Practicals

Paper –4 (Practicals based on paper 2)

1) Presentation of Data by frequency tables, Graphs and Diagrams.
2) Computation of Measures of central tendency.
3) Computation of Measures of Dispersion.
4) Computation of raw and central moments, and measures of skewness and kurtosis.
5) Computation of correlation coefficient and Fitting of lines of Regression (Raw and Frequency data)
6) Spearman's rank correlation coefficient and Kendall's Tau.
7) Curve fitting by Principle of least squares. (Fitting of a st. line, Second degree curve, power curve, exponential curve)
8) Most plausible solution of a system of linear equation.
9) Multiple and partial correlation (Three variables)
10) Multiple regression (Three variables)
11) Theory of attributes.

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B.Sc. Second Year
Statistics practical III
Paper 7

Time : 3 hrs **Max marks – 100**

		Marks.
1)	Record Book	10
2)	Viva voce	10
3)	Question paper	80
	Total	100

Question Paper.
All questions are compulsory.

Q.1 Marks – 40.
Problems based on practical nos.1,2,3,4,10.

Q.2 Marks – 40
Problems based on practical nos. 5,6,7,8,9

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Statistics practical IV

Paper 8

Time : 3 hrs Max marks – 100

		Marks.
1)	Record Book	10
2)	Viva voce	10
3)	Question paper	80
	Total	100

Question Paper.
All questions are compulsory.

Q.1 Marks – 40.
Problems based on practical nos.1,2,3,4,5, 6

Q.2 Marks – 40
Problems based on practical nos. 7,8,9,10.

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B.Sc.-Second Year (STATISTICS)

Practical paper III

List of Practicals

Paper –7 (Practicals based on paper 5)

1) Model sampling from Binomial & Poisson Populations.
2) Model sampling from Uniform, Normal & Exponential Populations.
3) Large sample tests-
   (Single mean, difference between means, single proportion, difference between proportions, difference between standard deviations.)
4) Tests based on students 't-test'
   (Single mean, difference between means and paired 't'.
5) Test based on Chi-square- Distribution (Test for variance, goodness of Fit,)
6) Chi-square test of independence of attributes.
7) Test based on F- Distribution- (Comparing Variances)
8) Fitting of Normal Distribution.
9) Problems based on area property of Normal Distribution.
10) Problems based on Methods of estimations
    (i) Maximum Likelihood Estimation
    (ii) Method of Moments.

Practical paper IV

List of Practicals

Paper –8 (Practicals based on paper 6)

1) Selection of sample using SRSWOR and verification of unbaisedness of sample mean, sample mean square and verification of variance of sample mean.
2) Selection of sample using SRSWR and verification of unbaisedness of sample mean, sample mean square and verification of variance of sample mean.
3) Sample of Proportions. verification of unbaisedness sample proportion, variance of sample Proportion.
4) Stratified Random sampling

   Problems based on Nyman and Proportional allocations & comparison with SRS.
5) Ratio and Regression methods of Estimation in SRS
6) Selection of samples using systematic sampling
7) Analysis of variance – completely Randomized Design.
8) Analysis of variance – Randomized Block Design.
9) Analysis of variance – Latin – Square Design.
10) Estimation of missing observation in RBD & LSD & its ANOVA.
11) Analysis of variance – 2^2 factorial design & 2^3 factorial design.

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B.Sc. Third Year
Statistics practical V
Paper 11

Time : 3 hrs **Max marks – 100**

		Marks.
1)	Record Book	10
2)	Viva voce	10
3)	Project Work	25
4)	Seminar on project	05
5)	Question paper	50
	Total	100

Question Paper.
(50 Marks compulsory) All question are compulsory.

Q.1 Marks – 25.
Problems based on practical nos.1,2,3,4,5,6

Q.2 Marks – 25
Problems based on practical nos. 7,8,9

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Statistics practical VI

Paper 12

Time : 3 hrs Max marks – 100

		Marks.
1)	Record Book	10
2)	Viva voce	10
5)	Question paper	80
	Total	100

Question Paper – All question are compulsory.

Q.1 Marks – 40.
Problems based on practical nos.1,2,3, 4,5,6

Q.2 Marks – 40
Problems based on practical nos. 7,8,9, 10.
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B.Sc.-Third Year (STATISTICS)

Practical paper V

List of Practicals

Paper – 11 (Practicals based on paper 9)

1) Computation of measures of fertility and mortality.
2) Problems on life tables.
3) Graduation of mortality sates by Gompertz Curve.
4) Construction of Unweighted Index Numbers.
5) Construction of index numbers by Laspeyre's , Paache's and Fisher's Formulae.
6) Construction of Cost of Living Index Number.
7) Construction of FBI & CBI.
8) Determining the trend in a time series by (1)The Method of Least Squares & (2) The Method of Moments.
9) Construction of seasonal Indices by the Method of (1) Simple Average & (2) Method of Moving Averages..

Practical paper VI

List of Practicals

Paper – 12 (Practicals based on paper 10)

1) Construction i) Charts for Mean & Range , Mean & S.D.
   ii) Charts for fraction defectives p - chart.
   iii) Chart for number of defects c - chart.
2) O.C. curve for single sampling and double sampling plan.
3) AOQ & ATI Curves.
4) Construction of difference tables- use of Newton's forward & backward formula .
5) Lagrange's interpolation formula, Newton's divided difference formula.
6) Numerical integration using Simpson's $(1/3)^{rd}$, $(3/8)^{th}$ rule, Trapezoidal rule.
7) Formulation of LPP & its dual.
8) Solution of LPP by Simplex method.
9) Solution of a Transportation
10) Solution of an Assignment problem.