ST. ALOYSIUS COLLEGE(AUTONOMOUS), JABALPUR

Reaccredited 'A+ 'Grade by NAAC(CGPA:3.68/4.00)
College with Potential for Excellence by UGC
DST-FIST Supported & STAR College Scheme by DBT

Faculty of Arts

SUBJECT: ECONOMICS

B.A. VI Semester

Paper- Statistics (Core)

Course Outcomes

CO. No.	Course Outcomes	Cognitive Level
CO 1	Enabling students to understand the statistics and different techniques of data collection and its presentation through Tabulation and Graphic Representation.	U and App
CO 2	Students will be able to understand the various methods of measuring central tendency, Dispersion, Coefficient of Variation, and Quartile Deviation.	U and An
CO 3	Enabling students to understand the procedure of solving the correlation and regression and its application.	U and App
CO 4	Students will successfully understand the preparation of time series and index numbers. It will enhance the computational skill of Estimating the time series and trend analysis. Enabling them to computes the cost of living index and Solves the Paasche's, Laspeyre's, Fisher's Index numbers	U and App
CO 5	Enabling students to understand the concept and rules of Probability. They will be able to understand and apply the concepts of research methodology and research report writing.	U and App

Credit and Marking Scheme

	Credits	Marks		Total Marks
		Internal	External	
Theory	6	40	60	**100**
Practical	-	-	-	**-**
Total	**6**			

Evaluation Scheme

	Marks	
	Internal	**External**
Theory	4 Internal Exams of 10 Marks (During the Semester) (Best 3 will be taken)	1 External Exams (At the End of Semester)

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Content of the Course

No. of Lectures (in hours per week): 4.5 Hrs. per week

Total No. of Lectures: 67.5 Hrs.   **Maximum Marks:** 60

Units	Topics	No. of Lectures
I	**Introduction**: 1. Statistics- Meaning, Definition, Importance, Scope and Limitations 2. Population and Sample, Sampling and Methods of Sampling. 3. Data Collection- Primary and Secondary Data. 4. Classification and Tabulation of Data. 5.Presentation of Data - Diagrams and Graphs	18
II	**Measures of Central Tendency** : 1. Central Tendency- Meaning, Importance and Characteristics. 2. Arithmetic Mean, Geometric Mean, Harmonic Mean and its applications. 3. Weighted Arithmetic Mean in Ancient India- An introduction. 4. Median and Mode. 5. Dispersion- Concept, Importance and Characteristics. 6. Measures of Dispersion- Range, Quartile Deviation and Mean Deviation. 7. Standard Deviation, Coefficient of Variation. 8. Coefficient of Skewness.	18
III	**Correlation & Regression**: 1. Correlation- Meaning, Types and Importance. 2. Karl Pearson's Coefficient of Correlation 3. Spearman's Rank Difference Coefficient of Correlation. 4. Regression- Introduction 5. Lines of Regression. 6. Regression Coefficient 7. Differences between Correlation and Regression and their uses.	18
IV	**Time Series & Index Number**: 1. Time Series- Concepts, Components and Analysis. 2. Measurements of Trend- Freehand Curve Method, Semi Average Method, Moving Average Method, Methods of Least square. 3. Index Number- Meaning, Characteristics, Importance, Uses, Limitations and Problems. 4. Construction of Index Number- Fixed Base Method and Chain base Method. 5. Consumer Price Index Number. 6. Laspeyre, Paasche and Fischer's Ideal Index Number. 7. Test of Reversibility.	18

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V	**Probability and Sources of Data in India**: 1. Probability- Definition and Concept. 2. Calculation of Probability- Addition Theorem and Multiplication Theorem. 3. Conditional Probability 4. Sources of Data Collection in India 5. Central Statistical Office 6. Sources of Demographical, Agricultural and Industrial Data.	18

Suggested Readings:

1. Croxton, Crowden and Klein (1971 - Applied General Statistics, Prentice Hall of India, New Delhi.
2. Gupta, S.C. (1993) - Fundamentals of Applied Statistics, S. Chand and Sons, New Delhi.
3. Nagar, A.L. and Das, R.K. (1993) - Basic Statistics, Oxford University Press, New Delhi.
4. Spiegel, M.R. (1992) - Theory and Problems of Statistics, McGraw Hill Book Co., London.
5. Levin and Rubin - Statistics for Management, Prentice Hall of India, New Delhi.
6. Srivastava, S.C. and Sanjay Srivastava - Fundamentals of Statistics, Anmol Publications Pvt. Ltd., New Delhi.
7. Books published by M.P. Hindi Granth Academy, Bhopal