

FACULTY OF AGRICULTURE
M.J.P. ROHILKHAND UNIVERSITY, BAREILLY
ORDINANCES

M.Sc. (Ag.)

(PREVIOUS AND FINAL EXAMINATION)

There shall be two examinations, one at the end of each year, the first being the M.Sc. (Ag.) Previous examination and the second M.Sc. (Ag.) Final Examination. The marks of both the examinations (Previous & Final) obtained in aggregate in Theory and practical will count together for a place on the pass list of the Final Examination. Division will be assigned as under on the total aggregate marks obtained at the both the examinations (Previous and Final) counted together.

First Division	60 % of the total aggregate Marks in
Second Division	48 % the theory and practical separately.

All the rest in Third Division, If they obtained the minimum pass marks of 36% in aggregate.

A candidate is required to pass in written and the practical examination separately.

Candidates must submit their thesis to the Registrar well in time. The thesis shall be examined by a Board of two examiners One-external and the other internal i.e. the teacher concerned. Each examiner shall award marks as follows-

Thesis (100 marks), out of 50 marks.

Viva (50 marks), out of 25 marks.

Their marks will be totaled to determine the candidate's marks out of 150.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS
(PREVIOUS & FINAL EXAMINATION)

The courses of study / examination shall be the following –

<u>Theory</u>			M.M. 100
Paper No.	Paper Code	Title of Paper	
Paper I	1522	Principles of Economics	" 100
Paper II	1523	Organisation and management of Co-operatives	" 100
Paper III	1524	Research Methodology & Statistics	" 50
Paper IV	1525	Agri-Business Management	" 100
Paper V	1526	Production Economics & Farm Management	" 100
Paper VI	1527	Agricultural Input Environment and Marketing	" 100
Either Or Thesis Practical	1528		
		Total	550
	1531	Previous Year	100
	1532	Final Year	100
	1529	Either practical on paper VI	50
		OR	
	1530	Viva-Voce on Thesis	
		Total	250
		Grand Total	800

Note-1. Any three papers can be offered in one year provided that paper III (Research Methodology & Statistics) is to be taken in the previous year examination and paper VI (With practical) or Thesis (With Viva) is offered in Final Examination. Research work for thesis may begin in the previous year.

M.Sc. (Ag.) AGRONOMY
(PREVIOUS & FINAL EXAMINATION)

The courses of study / examination shall be the following –

<u>Theory</u>			M.M. 100
Paper No.	Paper Code	Title of Paper	
Paper I	1534	Crop production I and Soil Fertility Management	100
Paper II	1535	Crop Physiology and Soil & Water Management	100
Paper III	1536	Statistical Method and Experimental Designs	50
Paper IV	1537	Crop Production II and Seed production Technology	100
Paper V	1538	Weed Management and Soil & Water Conservation	100
Paper VI	1539	Agro-meteorology, Agro- forestry	100
Either		Dry farming and Crop Production III	
Or Thesis		Total	550
Practical			
	1543	Previous Year	100
	1544	Final Year	100
	1541	Either practical on paper VI OR	50
	1542	Voce on Thesis	
		Total	250
		Grand Total	800

Note-1. Any three papers may be taken in one year provided that paper II (Statistics) is taken in the previous year examination and paper VI (With practical) c Thesis (With Viva) is offered in Final Examination. Research work for thesis may begi in the previous year.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS
(PREVIOUS & FINAL EXAMINATION)

Paper Code: - 1522

Paper I- PRINCIPLES OF ECONOMICS

M.M. 100

Scope and subject matter of economics, Macro, Micro approaches, Techniques of Economic Analysis, Marginal Analysis, Indifference Curve Analysis.

Theory of Demand: Derivation of demand curve, law of marginal utility, law of substitution, price and income effect, concept of elasticity, market demand and demand schedule, market structure and demand curve.

Theory of the firm: Basic elements, the production function, isoquant analysis, two factor-relationship, law of diminishing returns, function coefficients, marginal and average product functions, iso-cost lines.

Theory of Cost: Nature of cost, classification of cost, short run and of long-run costs, optimum product level determination marginal and average cost, returns to scale (firm as well as industry), concept of derived demand, price determination under alternative market system, monopoly, duopoly, oligopoly monopolistic, competition, monopsony, perfect and pure competition.

Theory of distribution: Theory of rent, concept of quasi rent, theory of wages interest and profit. Theory of Exchange: General Theory of international trade. Keynes's General Theory: concept of consumption function, saving and investment.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(PREVIOUS & FINAL - 1523)

M.M. 100

PAPER-II Organisation And Management Of Agricultural Cooperatives

INTRODUCTION: Cooperation ideology-origin, growth and development, Principles of cooperation, State and cooperation, History of cooperatives, Geneses of – cooperative movement in brief, Raiffeison and Scheulze concept of agricultural cooperatives, classification of cooperatives.

ORGANISATION: Organisation and operation of agricultural cooperatives, critical study of organisation, financial structure, operation and management of selected Cooperative institutions- Central Cooperative banks, State Cooperatives banks, Distt. level banks, Land development banks, Cooperative farming and Cooperative processing and Cooperative marketing.

MANAGEMENT: Cooperative management nature and function, Professionalised management in Cooperatives, Principles of management, Measures of management efficiency, Patterns of management, Functions of a Manager, Member, & Board of Directors, Relationship between Cooperative Manager and Cooperative employees.

ACCOUNTS & AUDIT: Cooperative accounts and Auditing, Accounts maintained by Cooperatives, main and subsidiary, Cost accounting as a management tool. Audit-definition nature and scope, Distinctive features of company and Cooperative audit, Procedure of Auditing Cooperative societies. Audit as a method of Business control.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(PREVIOUS & FINAL - 1524)

M.M. 50

PAPER-III RESEARCH METHODOLOGY AND STATISTICS.

Concept of research: Research methods – Historical, Descriptive, Experimental, case study and survey. Tools of research: interview, schedule, questionnaire, attitude scale (Measurement).

Planning a research Project, selection of problem, reviewing the literature, development of hypothesis, research design, collection and data analysis, representation of data, Reporting research findings.

Measures of central tendency (Mean, Mode, Median, Geometric mean, Harmonic mean) Partition values (Quartiles deciles and Percentiles) Measures of dispersion (Range, Quartile deviation, mean deviation, standard deviation), skewness.

Correlation and Regression: Bivariate frequency distribution Karl Pearson's coefficients of correlation, regression lines, regression coefficients and their relation with correlation coefficient, Multiple and partial correlation coefficients.

Test of significance: - Test of significance based on 'Z', 'T' and 'F' test and chi-square test. Quantitative analysis of data: Time series analysis, separation of secular trend, cyclical seasonal and irregular elements of time Series. Construction of Index numbers: Simple, Weighted, Consumer's, Fisher's.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(PREVIOUS & FINAL - 1525)

M.M. 100

PAPER-IV AGRI-BUSINESS MANAGEMENT

AGRI- BUSINESS:- Definition, Nature, Scope and prospects. Role of Agri-Business in Indian Economy – Problems, Policies and performances.

AGRO-CLIMATIC ZONES OF INDIA: – Suitability of farm enterprises viz. Cropping system, Livestock, Poultry, Fisheries, Horticulture and Forestry.

BUSINESS MANAGEMENT: - Business management of major farm enterprises.

AGRICULTURAL PROCESSING: - Meaning, Advantages, Problems and suggestions for improving efficiency in processing of:

Food grain, Oilseed, Horticultural, Dairy products, Meat & fish.

MARKETING OF FARM PRODUCTS: - Characteristics of farm products, marketable surplus, channels agencies and Institutions involved in Agricultural marketing, Marketing costs, Margins and price spread.

Role of commission on Agricultural costs and prices.

Government intervention in Marketing system.

Legislative Measures for improving Agri-products marketing.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(PREVIOUS & FINAL - 1526)

M.M. 100

PAPER-V PRODUCTION ECONOMICS & FARM MANAGEMENT

Meaning and nature of production economics. Concept of production function: Single and Multifactor case, shapes of production function.

FACTOR PRODUCT RELATIONSHIP:- Law of Diminishing Returns. Factor- Factor relationship: Concept of isoquant, ridge line, scale line or expansion path, law of substitution, optimum factor combination.

PRODUCT- PRODUCT RELATIONSHIP:- Concept of product transformation curve, various types of product, combination, joint, competitive, complementary, supplementary.

DERIVATION OF COST SCHEDULES:- Concept of cost flexibility and price flexibility, marginal cost and average cost inter-relationship. Revenue.

LINEAR PROGRAMMING:- An elementary study of profit maximization under constrained resources.

FARM MANAGEMENT:- Its meaning scope and nature relationship with other subjects, Economic principles applied to farm management.

Principles & practices related to efficient organisation & operation of farm business, farm planning and budgeting approach in Farm business.

FARM RECORDS AND ACCOUNTING:- Principles of cost accounting methods and practices of keeping various types of records on the farm.

Measurement of success of farm business.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(FINAL - 1527)

M.M. 100

PAPER-VI - AGRICULTURAL INPUT ENVIRONMENT AND MARKETING

Demand and supply scenario of major Agro inputs. Inputs V/s productivity, Pricing Agro inputs and information system for input marketing.

- 1- Seed:** - Seed production and supply – seed Marketing Distribution- Export and import of seeds – Demand for seed Pricing of seeds.
- 2- Fertilizer:** Supply – Demand (Consumption)- Demand supply gap-Prices – Fertilizer subsidy – Marketing of Fertilizers – Defects in fertilizer marketing- cost and marketing in Fertilizer marketing.
- 3- Plant protection of Chemicals:** - Groups of plant protection chemicals – production of pesticides – consumption of pesticides – marketing of pesticides.
- 4- Energy supply:** - Electricity- supply, demand and marketing- Pricing of Electricity – Pattern of electricity generation- Pattern of electricity consumption and supply Diesel – Supply, Demand and marketing,
- 5- Farm Machinery** – Demand and supply of farm machines – Tractor, other machines and implements – Repair services – Agro industries centres.
- 6- Farm Credits:** - Credit need, Sound system of credit cost of credit, procedural for mulation in sanction of farm loans,
Institutions in supply of inputs – National seeds – Corporation (NSC) State farms corporation of India (SFCEI) State seeds corporation (SSC'S') – Co-Operative Finance – Deposit Insurance and Credit Guarantee Corporation of India – Crop Loan – Higher Financing agencies – R.B.I., ARDC, NABADR, AFC, - Role of Legislature and Government in Input, Regulation and control.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

THESIS / RESEARCH PROJECT

(1528)

Eligible student will take up a research project in consultation with the Head of the department and will submit a written report to the department before commencement of the examination of the final year. The report will be evaluated by the external and internal examiners. The external and internal examiners will also conduct the viva voce based on project report.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(Previous & Final)

(1531 & 1532)

PRACTICAL

ON

(1522 & 1523)

M.M. 100

- (I) Development of research project proposal starting from the problem to the analytical framework.
- (II) Practical application of various sampling techniques.
- (III) Drawing a questionnaire and survey schedule.
- (IV) Visit to study the organisation management & functioning of different types of Co-operative Institutions.
- (V) Analysis of financial statement of Co-operative Institutions.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(Previous & Final)

(1531 & 1532)

PRACTICAL

ON

(1525 & 1526)

- 1- Survey of a village with particular reference to rural infrastructure- Road, Market, Panchayet, Cooperative health centre, Electrification.
- 2- Appraisal / Valuation of farm.
- 3- Preparation of plan and Budget of a farm: Small / Medium / Large.
- 4- Farm business analysis of different farm sizes- (Actual case study)
- 5- Enterprise analysis: Milk, small animals – Goat, Sheep, Poultry, and Major, Crops.
- 6- A study of market infrastructure and computation of price spread of major commodities in local market.

M.Sc. (Ag.) AGRICULTURAL ECONOMICS

(Final Year 1529)

PRACTICAL ON 1527

VI Special Practical

- 1- Map of Allahpur Block
- 2- General Information about Block.
- 3- General Information about District.
- 4- **Village Survey:** (A) Infrastructural study.
- 5- Land Utilization in sample village.
- 6- Cropping Pattern on various size of farms in selected Village / District.
- 7- Extent of Mechanisation in Agriculture – Small / Medium / Large & size farms.
- 8- Size of Agricultural Holding and Productivity in selected Village / District / States.
- 9- Extent of HYV, Fertilizer, seed, Irrigation, Insecticides & Pesticides on various size of farms in a selected Village / District.
- 10- System of Marketing of Agricultural input in District. Institutional Study-Problems & Solutions.
- 11- System of Marketing of Agricultural Produce: Problems & Solutions.
- 12- Tour report.