U.P. EDUCATION SERVICE SELECTION COMMISSION, PRAYAGRAJ

Syllabus

AGRICULTURAL ECONOMICS

(Assistant Professor-Higher Education)

(Subject Code-88)

Unit 1: Economic Theory

Nature and tools of economic analysis; theory of consumer behavior; production theory; costs theory; theory of firm; price determination under different markets, price discrimination, effect of taxation under different market conditions; welfare economics; market failure; nature of macroeconomic analysis; national income; consumption; saving and investment, Classical Keynesian, Neo-Classical and Neo-Keynesian theory of output and employment determination, theory of business cycle, functions and demand for money; inflation; IS-LM functions; **general equilibrium analysis;** monetary and fiscal policies, recent development in economic environment.

Unit 2: Agricultural Development and Policies

Role of agriculture in economic development; Sources of agricultural growth and development, challenges in economic growth and sustainable agriculure, characteristics of developing and developed economies; present development challenges; role of economic, technological, social, cultural, political and environmental factors; Green GNP, nature, sources and impact of technological challenge; rainbow (green, white, yellow, blue etc.) revolution; agriculture development in Asia; poverty inequality and development; interdependence between agricultural and industrial development. Growth models -Harrod-Domar, neo-classical, Rostow's growth stages, Lewis-fei-Ranis model, **induced innovation model,** land reforms; theory of share tenancy; institutions and development, features of planning in capitalist, socialist and mixed economies; role of infrastructure and technological change; agricultural policy analysis and reforms- input and output price policy, rural and irrigation infrastructure, credit policy etc.; policies and programmes for development of agro industries, dairy and fisheries; **Policy options for sustainable agriculture development,** measurement of poverty and poverty alleviation programmes.

Unit 3: Agricultural Growth Analysis

Determinants of agricultural growth and their measurements; planning models, features of planning in capitalist, socialist, neosocialist and mixed economies; types of planning - micro level, regional, sectoral, agro-eco regional development; characterzing agricultural growth, changes in cropping pattern, decomposition analysis, and sources of output growth; analysis of instability; capital formation, crop livestock insurance, infrastructure; transfer of technology- constraints to technology adoption, yield gap analysis and research planning; agricultural information system.

Agricultural policy analysis and reforms – energy, water, fertilizer, land, seed, labour, technology, rural infrastructure, marketing, pricing, trade etc.

Unit 4: Natural Resource Management

Characteristics and classification of natural resources; sustainability issues in natural resources; property rights, externalities, transaction costs, need for collective action, role of economics in natural resource accounting, planning, management and policy formulation; social welfare function; allocation of renewable and non-renewable resources (forests, water, land, etc.) under various market structures: Valuation of non market resources, Government programmes for conservation and development of natural resources. Climate changes, mitigation and policies.

Unit 5: Farm Management and Production Economics

Basic principles of farm management – law of variable proportions, law of equimarginal returns, opportunity cost principles, law of substitution, enterprises combination, time comparison and comparative advantage; cost concepts and analysis; farm efficiency measures; farm financial analysis; farm planning and budgeting; book keeping and accountancy; process of decision making under different knowledge situations; measurement and management of risk and uncertainty in agriculture (including livestock, horticulture, fisheries, forestry, etc.), diversification and insurance in agriculture and allied sectors. Types and systems of farming. Forms and applications of production functions- Linear, quadratic. square root, spillman, cubic, semi-log, Cobb-Douglas, constant elasticity of substitution (CES), variable elasticity of substitution (VES), etc; dualities between production, cost and profit functions; derivation of supply and factor demand functions from production and profit functions; optimization of resource allocation; resource-use efficiency and returns to scale; frontier production function; total factor productivity; Decision making under risk and uncertainties.

Unit 6: Agricultural Finance, Cooperation and Project Management

Importance of agricultural finance, objective, functions and principles of agricultural finance, sources of capital acquisition; rural credit structure-demand, supply, credit gap; classification of agricultural credit – sources and forms; cost of credit/ capital; credit appraisal-3Rs, 3 Cs and 7Ps of credit, estimation of credit requirement; **supervisory credit system,** reforms in agricultural credit policy; financial system in India-commercial banks, cooperatives. RRBs, micro-finance institutions (MFIs) global financial institutions; innovations in agricultural financing-microfinance, Kisan credit cards; **e-banking, credit inclusion, principles of cooperations, role of cooperatives under emerging scenario,** definition and characteristics of projects; need for project approach for agricultural development; SWOT analysis and project identification, project life cycle, project feasibility-market technical, financial and economic feasibility, social cost-benefit analysis; project risk analysis; project scheduling and resource allocation; financial and economic appraisal/measures , **choice of discount rate,** - net present value (NPV), internal rate of return (IIR), benefit-cost ratio (BCR); network analysis – PERT & CPM; fundamental of accounting and book-keeping; analysis of financial statements-balance sheet, income statement cash flow statement.

Unit 7: Agricultural Marketing and Price Analysis

Concepts of agricultural marketing; marketing functions-processing, transportation, storage and ware housing; channels of marketing agricultural produce-price spread and efficiency, structure, conduct and performance analysis; Indian marketing environment; market integration; marketing institutions-role and functions; government interventions including administrated price policy; regulated markets, market segmentation, **supply chain and value chain analysis in agril. commodities,** buffer stock operations, price stabilization measures and policies etc. **price forecasting for crop area allocation,** marketing of agricultural inputs, role of private sector in input and output marketing; forward trading and futures market e-NAM, commodity boards and contract farming; marketed surplus models; competitive and comparative advantage in trade, trade policies, models and agreements; regulations and reforms for marketing and trade, WTO, SPS measures and competitiveness; ecological concerns and marketing ethics.

Unit 8: Operations Research and Research Methods

Objective, types and process of research; role and uses of quantitative technique in business decision making; sampling techniques and sample size determination; sampling and non-sampling errors; index numbers, hypothesis testing. ANOVA, factor analysis, cluster analysis; measures of central tendency, measures of variation,skewness and kurtosis; correlation and regression, discriminant and dummy variable analysis; OLS, MLE estimation-assumptions and their violations, properties, simultaneous equations systems: identification and estimation; Linear programming; objective, assumptions, formulation of

linear programming problem, simplex method; primal and dual LP problems, Variable resource and price programming, game theory.

Unit 9: Organizational Behaviour and Human Resource Management

The agribusiness system; management processes, planning, controlling, organizing, motivating and leading; decision making; managerial skills; level of managers; organizational context of decisions; decision making models; management by objectives; organizational culture; management of organizational conflicts; managing change; leadership styles; group dynamics; motivation.

Human resource planning, job analysis and design; recruitment, selection, induction and placement; human resource training and development; management development; performance appraisal and job evaluation; wage and salary administration; promotion, transfer, separation, absenteeism and turnover, employee welfare and safety; morale; personnel supervision; styles; participative management; labour management relations; negotiation and negotiating skills; conflict management.

Unit10: Strategic Management and Entrepreneurial Skills

Strategic management – meaning, concept and scope; framework for strategic management; industrial (external) and organizational (internal) environmental factors influencing strategy; scanning the external and internal environment; strategy formulation; SWOT analysis; strategy implementation; strategy and structure, strategic analysis, strategy and technology, strategy and leadership, total quality management, the customer resource, development of strategy, creating competitive advantage strategy, evaluation of strategy.

Entrepreneurship and small business concepts; process of business opportunity identification; project feasibility study; detailed business plan preparation; managing small enterprises; planning for growth; sickness in small enterprises; government policies for promotion of small and tiny enterprises; rehabilitation of sick enterprises: entrepreneurship.