

**DETAIL SYLLABUS FOR THE TWO YEAR POST GRADUATE COURSE IN AGRICULTURAL BUSINESS MANAGEMENT UNDER SEMESTER SYSTEM (EFFECTIVE FROM ACADEMIC SESSION 2017-18)**

**SEMESTER—I**

**ABM-101 MANAGEMENT PRACTICES AND ORGANISATIONAL BEHAVIOUR**

Unit-I: Evolution of management thought, systems and contingency approach for understanding organisations, managerial process, functions, skills and roles in organisations

Unit-II: Social responsibility of business, communication

Unit-III: Understanding the managing individual behaviour-perception, personality, values, attitudes, learning, work motivation, individual decision making and problem solving

Unit-IV: Understanding and managing group process-interpersonal and group dynamics, applications of emotional intelligence in organisations, group decision making, leadership and influence process.

Unit-V: Understanding and managing organisational system-organisational decision and structure, work stress

**ABM-102 MANAGERIAL ECONOMICS**

Unit-I: Concepts and Techniques – Nature of Business Decision-making, Marginal and Optimization Concepts, Theory of Demand, Demand Functions, Income and Substitution effects, Elasticity of Demand, Demand Forecasting.

Unit-II: Production and Cost – Returns to Scale, Cost curves, Short-run and Long-run cost Curves, Economies of Scale

UNIT-III: Theory of Profit Maximization, Perfect Competition, Monopoly, Oligopoly.

Unit-IV Macro economics aggregates and concepts of national income; Determination of national income, Aggregate Consumption, Consumption Function, Decision to Invest.

Unit-V: Concept and measurement, Fiscal impact and investment, Inflation, Monetary Policy, Fiscal policy.

**ABM-103 QUANTITATIVE METHODS AND OPERATIONS RESEARCH**

Unit-I: Mathematical basis of managerial decision: Functions-application of functions-some special functions A.P. & G.P. and their managerial applications, Matrices

Unit-II: Markov Chains and their applications, frequency distribution and their analysis

Unit-III: Probability theory and probability distributions: Binomial, Poisson, Normal and Exponential

Unit-IV: Transportation and assignment models including trans-shipment and routing problems, queuing theory, Inventory management techniques

Unit-V: PERT/CPM, Decision theory and decision trees, Game theory, goal programming, Simulation

## **ABM-104 MARKETING MANAGEMENT**

Unit-I: Nature and scope of marketing, the marketing environment, environment scanning, Marketing Information System and Marketing Research

Unit-II: Understanding consumer and industrial markets, market segmentation, targeting and positioning, Product decisions—product mix, product life cycle, new product development, branding and packaging decisions, pricing methods and strategies

Unit-III: Channel management Decisions, wholesaler, retailer and physical distribution system

Unit-IV: Promotion decisions-promotion mix, advertising, sales promotion, personal selling, public relations

Unit-V: Evaluation and control of marketing efforts, consumerism, green marketing, international marketing

## **ABM-105 BUSINESS COMMUNICATION**

Unit-I: Importance and nature of business communications, Effective communication skill

Unit-II: Process of communication, barriers and gateways in communication

Unit-III: Do's and don'ts of business writing, commercial letters, writing business reports

Unit-IV: Oral communication-Presentation of reports, public speaking and negotiations

Unit-V: Legal aspects of business communication

## **ABM-106 INDIAN ETHOS AND VALUES**

Unit-I: Meaning, insights into Indian ethos, Model of management in the Indian socio-political environment, work ethos

Unit-II: Indian heritage in production and consumption, Indian insights into TQM

Unit-III: Problems relating to stress in corporate management-Indian perspective

Unit-IV: Teaching ethics, Business ethics, Trans-cultural human values in management education, relevance of values in management, need for values in global change-Indian perspective

Unit-V: values for managers, holistic approach for managers in decision making, secular vrs. spiritual values in management, personal growth and lessons from ancient Indian educational system, science and human values

## **ABM-107 ACCOUNTING FOR MANAGERS**

Unit-I: Financial Accounting-concept, importance and scope: Generally accepted accounting principles, Indian accounting standards, International accounting standards and IFRS: overview of accounting cycle

Unit-II: Preparation of basic financial statements-Income statement, Balance Sheet, Funds flow statement, Cash flow statement

Unit-III: Concept and need for financial statement analysis, different techniques-horizontal, vertical, ratio analysis, Economic Value Added, Shareholder's Value Added, Market Value Added, Altman model on prediction of corporate bankruptcy

Unit-IV: Cost Accounting Vs. Financial Accounting, cost classifications, cost sheet, standard costing and variance analysis

Unit-V: Budgeting and budgetary control, performance budgeting, zero base budgeting, marginal costing and breakeven analysis

### **ABM-108 MANAGEMENT INFORMATION SYSTEM**

Unit-I: MIS:Introduction,objective,definition,benefits,characteristics,information system level, types of information system, resistance to MIS, implementing MIS, features and components of MIS

Unit-II: Decision support system: Introduction, architecture, components, limitation, development

Unit-III: Data base and modelling: database models, objectives of DBMS, use of database, database administrators, language, data modelling concept, hierarchies model, network model, relational model,normalisation,CODD"12" rule, ER diagram

Unit-IV: Introduction to emerging trends technology, Expert system, knowledge management, A.I., data mining, data warehousing, E-CRM, software development life cycle and models

Unit-V: Software security: Threats, method of safety, cryptography, digital signature, RSA algorithm

### **SEMESTER- II**

#### **ABM-201 BUSINESS LAW**

Unit-I: The Indian Contract Act, 1872: Essentials of a valid contract, void agreements, performance of contracts, breach of contract and its remedies, quasi contracts

Unit-II: The Sale of Goods Act, 1930: Formation of a contract, rights of an unpaid seller, the Negotiable Instruments Act, 1881: Nature and types, negotiation and assignments, holder-in-due course, dishonour and discharge of a negotiable instrument

Unit-III: The Companies Act, 1956: Nature and types of companies, formation, memorandum and articles of association, prospectus, allotment of shares, shares and share capital, membership, borrowing powers,

Unit-IV: The Companies Act, 1956: Management and meetings, accounts and audit, compromise arrangements and reconstruction, prevention of oppression and mismanagement, winding up

Unit-V: Cyber Laws and Consumer Protection Act, 1986

#### **ABM-202 RURAL MARKETING**

Unit-I: Nature, characteristics and the potential of rural markets in India, Socio-cultural, economic and other environmental factors affecting rural marketing, Attitudes and behaviour of the rural consumers and farmers

Unit-II: Product planning, media planning, planning of distribution channels and organising personal selling in rural markets in India

Unit-III: Marketing of agricultural inputs with special reference to fertilizers, seeds and tractors, Organisation and functions of agricultural marketing in India, Classification of agricultural products with particular reference to seasonality and perishability

Unit-IV: Processing facilities for different agricultural products, Role of warehousing, Determination of agricultural prices and marketing margins, Role of Agricultural Price Commission, Role of Central and State governments

Unit-V: Institutions and organisations in agricultural marketing, Unique features of commodity markets in India, Problems of agricultural marketing, Nature, scope and role of cooperative marketing in India

### **ABM-203 HUMAN RESOURCE MANAGEMENT**

Unit-I: Concepts and perspectives on human resource management, HRM in a changing environment

Unit-II: Corporate objectives and human resource planning, Career succession planning, job analysis and role description

Unit-III: Methods of manpower search: attracting and selecting human resources, Induction and socialisation

Unit-IV: Manpower training and development, performance appraisal and potential evaluation, job evaluation and wage determination, employee welfare

Unit-V: Industrial relations and trade unions, dispute resolution and grievance management, employee empowerment

### **ABM-204 FINANCIAL MANAGEMENT**

Unit-I: Aims, objectives, scope and functions of financial management, Financial markets, instruments and regulatory authority, Time value of money-interest, present and future value calculation

Unit-II: Cost of capital-significance, estimation and components and weighted average cost of capital, estimation of return and risk on a single security: portfolio return and risk; risk –return relationship of two security portfolio, valuation of bonds; types of yield on bonds. Equity valuation by using dividend discount model. Bonus issue and equity valuation

Unit-III: Capital budgeting decisions-Significance, estimation cash flows, appraisal methods, NPV Vs.IRR method, risk and uncertainty in capital budgeting decisions, simulation in capital budgeting decisions. Management of working capital-Cash, receivables and inventory management

Unit-IV: Leverage-Business risk vs. Financial risk, operating leverage-Fixed operating expenses, degrees of operating leverage(DOL).Financial Leverage-Fixed financial charges, Degree of Financial Leverage(DFL),Financial break-even point and indifference point

Unit-V: Multinational financial management-An overview, Evolution of the International Monetary and Financial system, The foreign investment decision, political risk management, Country risk analysis, Managing short-term assets and liabilities, Long-term financing

### **ABM-205 BUSINESS ENVIRONMENT**

Unit-I: Nature, features and scope of business, concept of environment, interaction between business and environment, The emerging Indian and global scenario, Economic systems, Business and society, Economic role of government

Unit-II: Monetary and fiscal policies, Industrial Policy, Industries(Development and Regulation)Act, Industrial Licensing Policy; Public ,Private, Joint and Co-operative sectors; Micro, Small and Medium Enterprises in India

Unit-III: Planning in India, Balanced regional development, Development of backward areas, SEZs, Industrial sickness in India

Unit-IV: Environmental Management: Need for sustainable development, environmental accounting, Regulatory framework of environmental management, National Environment policy

Unit-V: Foreign capital and technology, Foreign Trade Policy of India, Corporate Social Responsibilities, Corporate Governance, Corporate Restructuring

### **ABM-206 PRODUCTION AND OPERATIONS MANAGEMENT**

Unit-I: Nature and scope of production and operations management; facility location; types of manufacturing systems and layouts; layout planning and analysis

Unit-Ii: Material handling-principles, equipments, line balancing-problems; operation decision, production planning and control-in mass production-in batch/job under manufacturing

Unit-III: Capacity planning-models; process planning—aggregate planning—scheduling-maintenance management concept-work study, method study, work measurement, work sampling, work environment, industrial safety

Unit-IV: Material Management: An overview of material management, material planning, budgeting and material requirement planning; purchase management; stores management

Unit-V: Quality assurance—Acceptance sampling, statistical process control, total quality management, ISO-9000; maintenance management; safety management

### **ABM-207 RESEARCH METHODOLOGY**

Unit-I: Nature and scope of research methodology; problem formulation and statement of research objectives; value and cost of information—Bayesian decision theory

Unit-II: Organisation structure of research; research process; research designs-exploratory, descriptive and experimental research designs

Unit-III: Methods of data collection—observational and survey methods; questionnaire design; attitude measurement techniques; motivational research techniques; administration of surveys; sample design

Unit-IV: Selecting an appropriate statistical technique; field work and tabulation of data; analysis of data; use of SPSS and other statistical software packages; advanced techniques for data analysis-ANOVA, Discriminant analysis, factor analysis, conjoint analysis

Unit-V: Multidimensional scaling and clustering methods; research applications

### **ABM-208 ENTREPRENEURSHIP DEVELOPMENT**

Unit-I: Concept and overview of entrepreneurship-definition, nature and characteristics, need and importance, benefits of being an entrepreneur, types of entrepreneurs, entrepreneur and entrepreneurship, entrepreneur vs. manager, entrepreneurs vs. entrepreneurship; evolution and growth of entrepreneurship in India—factors affecting growth of entrepreneurship in India, Indian society and entrepreneurship development; role of entrepreneurship in economic development

Unit-II: Entrepreneurial characteristics, skills and competencies, role of entrepreneurs, Entrepreneurial input; entrepreneurial behaviours and entrepreneurial motivation. N-Achievement and managerial success, entrepreneurial development programme in India-History, support, objectives, stages of performances; planning and EDP-objectives. Target group, selection of centre, pre-training work; Government policy towards MSMEs

Unit-III: Building a new identity-identity search, identity formation and identity establishment; rural entrepreneur, women entrepreneur, minority group; managing innovation function; goal settings-goal settings theory, MBO as a goal setting process, SMART goal setting; creativity and problem solving—source of business idea, ideation, idea generation methods, idea processing, input requirements, problem-inventory analysis, barriers to problem solving, problem solving techniques

Unit-IV: Business opportunities in the context of industrial policy of the State, role of business incubation centres in promoting entrepreneurship, start-up policy framework and incentives, Entrepreneurial success in rural areas, case study of successful entrepreneurs

Unit-V: Sources and criteria of financing, fixed and working capital assessment, technical assistance, marketing assistance, sickness of units and remedial assistance, preparation of feasibility reports and legal formalities and documentation, role of DICs in the districts of the state.

### **SEMESTER-III**

#### **ABM-301 AGRI ECONOMICS**

Unit-I: Agriculture and Economic Development- Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Interdependence between agriculture and industry

Unit-II: Diversification of Rural Economic activities- Livestock economics- Livestock resources and their productivity ; White revolution ; Fishery and poultry development ; Forestry, horticulture and floriculture ; Issues and problems in rural industrialization and development of agro-based industries.

Unit-III: Agricultural production and productivity- Agricultural production- Resource use and efficiency; production function analysis in agriculture, factor combination and resource substitution; Cost and supply curves; Size of firm and laws of returns.

Unit-IV: Agricultural prices- marketing and state policy ; Agricultural markets and market efficiency-Marketing functions and costs ; Market structure and imperfections ; regulated markets ; marketed and marketable surplus ; Crop insurance ; Terms of trade between agricultural and non-agricultural

prices ; Need for state interventions ; Objectives of agricultural policy- Instruments and evaluation ; Food security in India and Public Distribution System.

Unit-V: Rural savings and capital formation; characteristics and sources of rural credit institutional and non-institutional; Reorganisation of rural credit- cooperatives, commercial banks, regional rural banks, Role of NABARD.

### **ABM-302 AGRI BUSINESS AND CO-OPERATIVE MANAGEMENT**

Unit-I: Agricultural business management, forms of business organisation, production relationships, cost concept, farm planning

Unit-II: Agricultural marketing, agribusiness and balance sheet analysis, project preparation, role of agro-processing in agribusiness development

Unit-III: Principles of cooperation, process of cooperative formation, cooperative legislation, governance in agribusiness cooperatives, management of cooperatives, overview of agribusiness cooperatives

Unit-IV: Credit cooperatives, production/processing based cooperatives, cooperative marketing, dairy cooperatives, tribal cooperatives

Unit-V: Financing agribusiness cooperatives, business development planning for cooperatives, MIS for agribusiness cooperatives, collective action and leadership in cooperatives, promotion of cooperative movement-education and training

### **ABM-303 AGRI IMPORT AND EXPORT MANAGEMENT**

Unit-I: Introduction to agriculture, forms of agriculture, production, need for import and export, analysis of marketable surplus and marketed surplus, analysis of import and export statistics of agricultural products in India, macroeconomic forces

Unit-II: Overview of world agricultural trade, issues impacting international agricultural trade, agricultural policy, technology advancement on agricultural products

Unit-III: Import requirements-causes, identifying agri products for import ,import substitution, regulation of imports, quality standards, scanning the countries for importing the required agri products, import planning, documents required,

Unit-IV: Identifying foreign markets for agri export, marketing plan for exports, export documents and procedure, terms of payment and export finance, legal dimensions

Unit-V: Institutional infrastructure for export promotion in India, export assistance, State trading in imports and exports, working of the State trading organisations in India

### **ABM-304 FOOD PROCESSING AND FARM MACHINERY MANAGEMENT**

Unit-I: Present status of food industry in India, introduction to operations of food industry, basic principles of food processing and food preservation, packaging of foods, analysis of costs in food organisations

Unit-II: Risk management, Laws and regulations related to food industry, food production and marketing, quality management, quality standards, PFA, ISO, etc.

Unit-III: Farm machinery selection for different farm size and for different agro climatic conditions, scheduling of farm operations for higher efficiencies, indices of machine performance

Unit-IV: Cost analysis of operations using different implements, economic performance of machines, optimisation of tractor implement system and transport of farm produce

Unit-V: Case studies on project formulation in various types of food industries—cereals and pulses, milk and dairy products, processing of fruits and vegetables, egg and poultry processing; agricultural equipments industry- their production, marketing and constraints; establishment of agricultural engineering enterprise (agro service centres, etc.)

### **ABM-305 AGRI LOGISTICS AND SUPPLY CHAIN MANAGEMENT**

Unit-I: Overview of logistics: introduction, nature, concepts, evolution, importance, components and functions of logistics management; Introduction to supply chain management, value chain, supply chain effectiveness and Indian infrastructure, outsourcing and 3PLs and fourth party logistics(4PLs)

Unit-II: Elements of logistics and supply chain management: demand forecasting, functions of inventory, warehousing and distribution centres, transportation, protective packaging, order processing, material handling with special reference to agri products

Unit-III: Performance measurement of logistics and supply chain management-dimensions, basic tools, impediments to improved performance; Logistic and supply chain management in Indian agri industry like edible oil industry, sugar industry, bakery and confectionary industry, cereal and pulses industry

Unit-IV: Issues in marketing and customer service with special reference to agri business: changing environment and the importance of CRM, Gap analysis for customer service management, efficient customer response planning for uncertainty, product costing for uncertainty

Unit-V: Logistics & supply chain management and Information technology in agri business-- from vertical integration to virtual integration, transiting from made- to- stock to build- to- order, integrated IT solutions for L&SCM, emerging technologies in L&SCM

### **ABM-306 AGRICULTURE AND FOOD RETAILING**

Unit-I: Fundamentals of retailing-unorganised vs. organised retail, elements of retail marketing mix, SWOT analysis of retail industry in India, Retail formats and classification of retailers, relationship between agriculture and food retailing

Unit-II: Retail marketing in the modern age; Importance of e-commerce, business environment for e-retailing, the digital age and the new global culture for retailing with special reference to food retailing in local, national and global context

Unit-III: Retail strategic planning and operations management, evaluating the competition in retailing, market selection and location analysis, customer services and retail selling with special reference to agri business



Unit-IV: retail merchandising, merchandise selection and planning, range planning, category management; retail pricing: strategies and techniques with special reference to food retailing

Unit-V: retail brand positioning, differentiation, gaining strategic competitive advantage, promotion of retail brand, retailing and creating right atmosphere, ambience and interior & exterior environment with special reference to food retailing

### **ABM-307 MICRO FINANCE AND SOCIAL ENTREPRENEURSHIP**

Unit-I: Micro finance overview: Evolution, role ,scope and importance of micro credit and micro finance in India, distinctive features, advantages, micro finance and socio-economic development, micro finance environment in India and abroad, micro credit and micro finance models

Unit II: Financial institutions for rural development, basic understanding of rural and development credit, institutional structure of rural financing in India---policy and schemes of NABARD, recent financing schemes of the government

Unit-III: Micro finance at small group level: concept, emergence, objectives, thrust areas, case studies of recent success stories; management of small groups, cluster and federation from credit and trade perspectives, role of facilitating agencies

Unit-IV: Social image of an entrepreneur, myths around entrepreneurship development: can everybody be developed through entrepreneurship development programme, entrepreneurs are born and cannot be developed; Entrepreneurial contributions and Indian economy, Social structure of India, social entrepreneur-who and why; social entrepreneurship in India, growing number of social entrepreneurs in India, typical sectors of investment of social enterprises,

Unit-V: Problems and prospects in developing entrepreneurship, Role of government in the social entrepreneurship landscape- need of a national fund ,budget initiatives, some established social enterprises, NGO's role, establishing relationship with linkage agencies, Entrepreneurship development in rural and tribal areas

### **ABM-308 SUMMER TRAINING PROJECT REPORT AND VIVA VOCE**

#### **SEMESTER-IV**

### **ABM-401 BUSINESS POLICY AND STRATEGIC MANAGEMENT**

Unit-I: Business policy as a field of study; general management point of view; objectives of business policy, evolution of business policy, strategic intent—vision, mission, goals and objectives, strategic management—nature and scope

Unit-II: Strategy formulation and choice: Environment analysis, SWOT analysis, experience curve, BCG matrix, GEC model, SPACE, competencies and organisational capabilities, power dynamics and organisational values

Unit-III: Strategy implementation: project, procedural, behavioural, structural and resource allocation

Unit-IV: Strategy evaluation and control: concept and techniques; management of strategic change, different issues

Unit-V: Value chain and competitive analysis: Framework for analysing competition, competitive advantage of a firm, value chain analysis, turnaround management, mergers and acquisitions; strategic management in an international firm

### **ABM-402 TOTAL QUALITY MANAGEMENT IN AGRI BUSINESS**

Unit-I: Basic concepts of total quality, evolution of TQM, acceptance sampling and inspection plans, quality improvement teams, functional linkage of quality with reliability and maintainability, six sigma, humanistic aspects of TQM

Unit-II: The importance of quality and the role of quality assurance in agri business, the quality control process and its relevance, Quality grades and standards: overview and relevance, benefits to consumers, producers and food processors

Unit-III: Food grades and standards for various food commodities: cereals, pulses, fruits and vegetables, meats, poultry products; Review of statistics relevant to quality control, quality control charts used in the food industry

Unit-IV: Process control in food processing plants in India and abroad to assess food quality-quality maintenance, quality improvement and quality deterioration

Unit-V: Food quality standards and world food trade, differences in quality regulations in different countries and its impact on world food trade

### **ABM-403 E-COMMERCE AND AGRI BUSINESS**

Unit-I: E-commerce overview: Introduction, features, importance to economy, models of e-commerce, e-commerce status in India, key success factors, advantages, limitations and challenges in e-commerce with special reference to India

Unit-II: Technology for e-commerce; internet trading, electronic data interchange, electronic payment system, adoption of e-commerce by employees, customers, channel partners, suppliers, service providers and regulatory authority

Unit-III: Guidelines for effective implementation of e-commerce in India; Important decisions for e-commerce: designing website, designing web address, presence in search engines and directories, advertising the website, monitoring and updating

Unit-IV: Present practices of e-commerce in agri business: online transactions, marketing, delivery of information intensive products through online, building trust through branding, online promotion on the website; customer service and value addition through e-CRM and e-SRM

Unit-V: Success stories of organisations involved in e-agri business, case studies and future vision of e-agri business in India

## **ABM-404 FINANCING OF AGRICULTURE BUSINESS**

Unit-I: Financial policy, sources of finance: external, internal, owned, debt, foreign financial participation; raising finance-some important issues: effect of legal form of organisation, provisions of the Companies Act, control of capital issues; need for financing agri business in India, assessment of the capacity of the borrowers to borrow and repay

Unit-II: financial markets: money and capital markets; regional and all India financial institutions: commercial banks, regional rural banks, NABARD, cooperatives'(NCDC and other institutions)Agro Industries Corporation, IDBI, IFCI, ICICI, SFCs, SIDCs; LIC, Non-banking financial companies

Unit-III: Agri business financing system in India: aims and objectives of financing of agri-business, framework of financial decision making, changing role of finance manager, long term finance and short term financing for agri business- methods of appraising working capital requirements

Unit-IV: Precautions and procedural formalities of financing: pre, progress and post financing requirements, RBI guidelines

Unit-V: Role of external finance for agricultural production, marketing and processing- demand assessment, repayment method, steps for NPA reduction; problems, prospects and challenges in financing of agri business in India

## **ABM-405 DERIVATIVES WITH COMMODITY FUTURES**

Unit-I: Role and Functions of Derivatives: Economic Role, Risk Management, Price Discovery, and Transactional Efficiency. Types and Classification of Derivatives: Options, Forwards, Futures and Swaps. OTC Derivatives and Exchange Traded Derivatives. Users of Derivatives: Market makers, Hedgers, Speculators and Arbitrageurs.

Unit-II: Commodity Markets: Key Characteristics, Market Participants, Commodity Investments, Commodity Return and Volatility, Commodity Return Correlations, Commodity Hedging. Commodity Indexes: Concepts, Index Composition, Index Weights, Index Rebalancing and Return and Volatility calculation of Commodity Indexes.

Unit-III: Futures and Forwards on Commodities and its Indexes. Mechanics of Future Markets: Specification of futures contracts, margin money on Futures Contract, Daily Settlement of the contracts and margin call and Futures Clearing Corporation. Futures pricing and Hedging strategies using Futures. Difference between Futures and Forwards.

Unit-IV: Options on Commodities and its Indexes, Types of Options, Options Clearing Corporations, Trading Strategies involving options, Combinations of options – spreads, straddle, strips, straps and strangle. Pricing of options – Black & scholes Model, Option Greeks and Delta Hedging.

Unit-V: Swaps, Modus Operandi of Swaps, Mechanics of Interest Rate Swaps, Valuation of Interest Rate Swaps, Credit Risk in Swaps.

## **ABM-406 AGRI TECHNOLOGY MANAGEMENT**

Unit-I: Technology management-Aims and objectives, technology absorption and diffusion, technology marketing issues, management of technological change: R&D activities and costing of technologies, government and private initiatives for upliftment of technology for agriculture

Unit-II: Identification of agri technology, technologies profiles, agro ecological and socio economic conditionality, refinement and adoptability of technology; technological need and preparatory management, policy perspectives

Unit-III: High-tech horticulture-high density planting in fruit crops, integrated pest management, integrated nutrient management of important fruits and vegetables, precision farming, micro propagation, micro irrigation, protected cultivation, value addition

Unit-IV: High-tech agriculture-seed production technique, high yielding and hybrid varieties, bio tech products, new crop establishment method, input use efficiency, leaf colour chart for nutrient management, value addition in agriculture

Unit-V: Seed and fodder management, bio technological applications in dairy industry, Ultra High Temperature(UHT) pasteurization of milk, technology management for live stock products, value addition in eggs

## **ABM-407 Dissertation and Viva-Voce**

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