

**Course No. : ABM -111      Course Title: Principles of Management and Agribusiness**

**Credit : (1+1=2)      Semester: I**

**Theory:**

Agri-business: Meaning, definition, history and scope of agri-business (Input, Farm Product Sectors). Importance of agri-business in the Indian economy. Changing dimension of agricultural business. Agri-business Management-distinctive features, nature and components.

Introduction to management-Management functions -Management levels-Managerial roles-Management skills-Definitions of management-Role of management. Elements, Levels, Process & Functions of Management, Functions of Management:

1. Planning: Definition importance, characteristics, Steps in planning

Types of planning Nature and importance-Purpose of planning-Forms of planning- types of planning -Steps in planning -Limitations of planning.

2. Organizing: Meaning- definition, importance, Characteristics/Nature of organization. Principles & Process of organization.

3. Directing-definition, functions, techniques, qualities of good supervisor.

4. Controlling –Definition, Elements, Process of control, Techniques/ Tools of control.

Farm business analysis - Farm efficiency measures, farm financial & cash accounts, Net worth statement, systems of book keeping.

**Practical:**

Study of various business models in agri-business. Study of farm records. Study of Systems of book keeping. Study of measures of farm income. Study of measures of farm efficiency. Study of farm planning techniques & situations. Study of farm budgeting techniques & types. Study of farm inventory. Study of cost ratios, capital ratio. Study of balance sheet financial ratio analysis.

**Teaching Schedule- Theory with weightages (%):**

<b>Lesson No</b>	<b>Topics</b>	<b>Weightage (%)</b>
1 & 2	Agribusiness – Definition, scope for agribusiness in India.	13
3 & 4	Management – Definition, Characteristics, Importance	12
5 & 6	Elements, Levels, Process & Functions of Management	13
7 & 8	Planning- Definition importance, characteristics, Steps in planning Types of planning	12
9 & 10	Organizing- definition, importance, Characteristics/Nature of organization. Principles & Process of organization.	13
11 & 12	Directing-definition, functions, techniques, qualities of good	12

	supervisor.	
13 & 14	Controlling –Definition, Elements, Process of control, Techniques/ Tools ocontrol	13
15 & 16	Farm business analysis (Farm efficiency measures, farm financial & cash accounts, Net worth statement, systems of book keeping)	12

**Practical Exercises:**

Exercise No.	Title
1	Study of various business models in agri-business.
2	Study of farm records
3	Study of farm inventory
4	Study of System of book keeping
5	Study of farm accountancy
6	Study of measures of farm income
7	Study of measures of farm efficiency
8	Study of farm planning techniques & situations
9	Study of farm budgeting techniques & types
10	Study of problems of partial budgeting
11	Study of cost ratios&capital ratio.
12	Study of balance sheet & financial ratio analysis.
13	Study of farm income statement
14	Study of methods of valuation of farm inventory
15	Study of preparation of farm financial budget & farm family living budget.
16	Study of preparation of cash flow plan

**Suggested readings:**

**1) Text Book:**

**2) Reference Books:**

1. K.Loknandhan, K.Mani, K.Mahendran Innovations in AB
2. D.K.Tripathi Principles& Practices of Management.
3. S.S.Johl, T.R.Kapoor Fundamentals of farm business management

**3) e-books:**

**Course No. : ABM-122**

**Course Title: Agro-Based Industrialization**

**Credit : (1+1= 2)**

**Semester: II**

**Theory:**

Agro-based Industries: Importance and need, classification of industries, role of agro-processing industries in the Indian economy. Types of agro based industries-sugar mills, cotton ginning mills, dal mills, rice mills, poha mills, fruit processing industries institutional arrangement, steps in setting up of agro-based industries. Constraints in establishing agro-based industries. Basis of development of agro-based industries in specific pocket e.g. sugar mills in Western Maharashtra, Ginning and processing of cotton in Vidarbha, Dal mills and Rice mills etc. Growth and modernization of these Agro based industries in different regions – Modernization of industries, Employment and income generation from agro based industries at macro level and overall impact in the development of the region /State. Potential agro-based industries- Grape wine making industries, soya-processing industries, mango pulp processing industries.

**Practical:**

Study of oil processing industry, Study of dal processing industry, Study of milk processing industry, Study of wine processing industry, Study of fruits processing industry, Study of vegetables processing industry, Study of paddy processing industry, Study of wheat processing industry, Study of sugar industry & Visit to agro-processing industries of different commodities.

**Teaching Schedule- Theory with weightages (%):**

Lectures No.	Topic	Subtopic	Weightage (%)
1	Agro-based Industries Importance and Need	Definition, Meaning, IMP., Need	5
2	Classification of Industries	Classification of Agro-based Industries on the various basis	5
3	Role of Agro-processing Industries in the Indian Economy	Role of agro-processing Industries in employment, Trading, EXIM etc its shares in Indian Economy	5
4,5,6	Types of Agro-based Industries	Sugar Mills: Present status of sugarmills in India, Importance in development, Products and By Products. Cotton Ginning mills; Present status, Importance in development, Products and By Products Dal mills : Present status, Processing management :- Methods; Dry milling, wet milling, Rice mills : Present status, Processing, Products Fruit Processing	20

		Industries: Present status, Examples, Need and scope	
7	Steps in setting up of Agro-based Industries	1) Identification of Project 2) Market Analysis 3) Technical and Organizational Analysis 4) Financial and Economic Analysis 5) Feasibility Report Preparation 6) Finance 7) Government Aid 8) Monitoring and Evaluation	10
8,9,10	Constraints in establishing agrobased industries	1) Infrastructural constraints 2) Technological constraints 3) Social and the cultural constraints 4) Resource utilization constraints	20
11	Growth and modernization of Agro based Industries	1) Government Initiatives for growth, modernization and development of Agrobased Industries	10
12	Employment and income generation from agro based industries at macro level and overall impact in the development	2) Employment and income generation from Agro-processing, Forward and backward, Export, Research, Transport.	5
13	Potential agro-based industries Grape wine making Industries	Present status Economic Importance Post Harvest management wine making process.	5
14	Soybean Processing	Present status Processing Procedure Products and by products	10
15	Mango pulp processing Industry	Present status Processing Management Products and By Products	10
16	Milk Processing	Present status, Production and Processing of Important value-added products,	5

### Practical Exercises:

Exercises No.	Title
1	Study of Oil Processing Industry
2	Study of Dal Processing Industry
3 & 4	Study of Milk Processing Industry
5 & 6	Study of wine Processing Industry
7 & 8	Study of Fruits Processing Industry
9 & 10	Study of Vegetables Processing Industry
11	Study of Paddy Processing Industry

12	Study of Wheat Processing Industry
13 & 14	Study of Sugar Industry
15 & 16	Visit to Agro-Processing Industries

### **Suggested readings:**

#### **1) Text Book:**

1. Srivastava, U.K. Agro-processing Strategy for Acceleration and Exports. Oxford University Press YMCA, Library Building, Jai Singh Road, New Delhi -110 001.
2. Diwase, Smita. Agri-Business Management. Everest Publishing House, Everest Lane, 536, ShaniwarPeth, AppaBalwantChowk, Pune – 411 030.

#### **2) Reference Books:**

#### **3) e-books:**

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**Course No. : ABM -233**

**Course Title :Agricultural Informatics**

**Credit : (1+1=2)**

**Semester: III**

#### **Theory:**

Introduction to Computers, Anatomy of Computers, Memory Concepts, Units of Memory, Operating System, definition and types, Applications of MS-Office for creating, Editing and Formatting a document, Data presentation, tabulation and graph creation, statistical analysis, mathematical expressions, Database, concepts and types, creating database, uses of DBMS in Agriculture, Internet and World Wide Web (WWW), Concepts, components and creation of web, HTML, XML coding.

Computer Programming, General Concepts, Documentation and Program Maintenance, Debugging programs, Errors. Introduction to Visual Basic, Java, Fortran, C/ C++, etc, concepts and standard input/output operations, Variables and Constants, Operators and Expressions, Flow of control, Inbuilt and User defined functions, programming techniques for agriculture.

e-Agriculture, concepts, design and development. Application of innovative ways to use information and communication technologies (IT) in Agriculture. ICT for Data Collection, formation of development programmes, monitoring and evaluation of Programmers. Computer Models in Agriculture: statistical, weather analysis and crop simulation models, concepts, structure, inputs-outputs files, limitation, advantages and application of models for understanding plant processes, sensitivity, verification, calibration and validation. IT application for computation of water and nutrient requirement of crops, Computer-controlled

devices (automated systems) for Agri-input management, Smartphone mobile apps in Agriculture for farm advises, market price, postharvest management etc; Geospatial technology, concepts, techniques, components and uses for generating valuable agri-information. Decision support systems, taxonomy, components, framework, classification and applications in Agriculture, DSS, Agriculture Information/Expert System, Soil Information Systems etc for supporting Farm decisions. Preparation of contingent crop-planning and crop calendars using IT tools.

**Practical:**

Study of Computer Components, accessories, practice of important DOS Commands. Introduction of different operating systems such as windows, Unix, Linux, Creating, Files & Folders, File Management. Use of MS-WORD and MS Power point for creating, editing and presenting a scientific Document, Handling of Tabular data, animation, video tools, art tool, graphics, template & designs. MS-EXCEL - Creating a spreadsheet, use of statistical tools, writing expressions, creating graphs, analysis of scientific data, handling macros. MS-ACCESS: Creating Database, preparing queries and reports, demonstration of Agri-information system. Introduction to World Wide Web (WWW) and its components, creation of scientific website, presentation and management agricultural information through web. Introduction of various programming languages such as Visual Basic, Java, Fortran, C, C++, and their components Hands on practice on writing small programmes. Hands on practice on Crop Simulation Models (CSM), DSSAT/Crop-Info/Crop Syst/ Wofost. Preparation of Inputs file for CSM and study of model outputs, computation of water and nutrient requirements of crop using CSM and IT tools. Use of smart phones and other devices in agro-advisory and dissemination of market information. Introduction of Geospatial Technology, demonstration of generating information important for Agriculture. Hands on practice on preparation of Decision Support System.

**Teaching Schedule- Theory with weightages (%):**

<b>Lectures No</b>	<b>Topic</b>	<b>Sub topi</b>	<b>Weightage (%)</b>
1.	Introduction to Computers, Operating System, definition and	Operating System, Devices of computer Internal and	10

	types, Application of MS-Office for document creation & Editing.	External devices and MS-Office	
2.	Interpretation and graph creation, statistical analysis, mathematical expression.	MS-Excel and Pie Chart and Table and Excel Calculation by using Formula Command	10
3.	Concept and types of database, uses of DBMS in Agriculture, World Wide Web (WWW)	What is DBMS, and How DBMS work in Agriculture, and Introduction of www	10
4.	Concepts and components. Introduction to computer programming languages,	Components of Computer and How computer operate by Programming Languages	10
5.	Concepts and standard input/output operation.	Inputs and Outputs devices and their operation	5
6.	e-Agriculture, concepts and application, Use of ICT in Agriculture.	Definition, and ICT in Agriculture	5
7.	Computer models for understanding plant processes.	Models for understanding plant processes.	5
8.	IT application for computation of water and nutrient requirement of crops.	How IT application for various automation system	5
9.	Computer-controlled devices (automated systems) for Agri-input management.	Computer-controlled devices their names and how used in Agri-input management	5
10.	Smartphone Apps in Agriculture for farm advises.	Various apps in Agriculture viz. Krishiking, Kisan World, APEDA, and various IT based Projects	5
11.	Market price, postharvest management, etc.	About Market Price and as per APMC and commodity market. And Postharvest Management of products for market.	5
12.	Geospatial technology for generating valuable agri-information.	Meaning, how use in agri-information	5
13.	Decision support systems, concepts, components and applications in Agriculture	Meaning, Decision support systems for farmer	5
14.	Agriculture Expert System.	Expert decision system for agriculture	5
15.	Soil Information Systems etc for supporting Farm decision.	Various Soil Information dept in college and university Jurisdiction	5
16.	Preparation of contingent crop-planning using IT tools.	Various contingent crop planning in IT.	5

**Practical Exercises:**

Exercise No.	Title
1	Study of computer Components, accessories, practice of important DOS Commands.
2.	Introduction of different operating systems
3.	File Management
4.	Use of MS-WORD and Power point
5.	Use of MS-EXCEL creating a spreadsheet.
6.	Use of statistical tools, writing expressions,
7.	Study of creating graphs and analysis of scientific data.
8.	Study of MS-ACCESS : Creating Database, Preparing queries and reports
9.	Study of Demonstration of Agri-information system
10	Study of Introduction to World Wide Web (www)
11	Study of Introduction of programming languages.
12	Study of Crop Simulation Models (CSM) such as DSSAT/CropSyst/Wofost
13	Computation of water and nutrient requirements of crops using CSM and IT tools.
14	Introduction of Geospatial Technology for generating valuable information for Agriculture
15	Study of Hands on Decision Support System
16	Study of Preparation of contingent crop planning.

**Suggested readings:****1) Text Book:****2) Reference Books:**

1. by Pradeep K. Sinha and Priti Sinha Computer Fundamentals, III edition, BPB Publications, B-14, Connaught Place, New Delhi – 110 001.
2. by P.K. Sinha Computer Fundamentals, BPB Publications, B-14, Connaught Place, New Delhi – 110 001.
3. Mastering Office Professional for window 95, BPB Publications, B-14, Connaught Place, New Delhi – 110 001.
4. Statistical Methods for Agricultural workers by V.G. Panse and P.V. Sukhatma, ICAR, New Delhi.

**3) e-books:**

1. [http://www.tutorialsforopenoffice.org/category\\_index/base.html](http://www.tutorialsforopenoffice.org/category_index/base.html)
  2. <http://www.nrsc.gov.in/Agriculture>
  3. <http://iasri.res.in/>
  4. <http://mkisan.gov.in/downloadmobileapps.aspx>
  5. <http://communicationtheory.org/berlos-smcr-model-of-communication>
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**Course No. : ABM -234 Course Title: Human Resource Management and Development**

**Credit : (2+1=3)**

**Semester: III**

**Theory:**

**Human Resources Management:** Definition, Nature, Scope and objectives of HRM, Difference between HRM and PM, Importance of HRM, The changing environment of HRM, The changing role of HRM. **HRP / Manpower Planning:** Definition, Need HRP, Career Planning and Succession Planning. **Job Analysis:** Job Terminology, Process of Job Analysis, Job Description, Job Specification. **Human Resource Acquisition:** Meaning, Sources, and Process of Recruitment, Meaning, Process Test of Selection, Meaning, Objectives and Types of Interview, Meaning, Purpose, Process and Problems of Induction, Meaning and Problems of Placement. **Training and Development:** Meaning, Benefits and Process of Training, Methods and Problems of Training, Career Development, Meaning and Techniques of Executive Development, **Performance Appraisal:** Nature, Objectives and Methods of Performance Appraisal, Meaning and Types of Promotion, Meaning and Types of Transfers, Meaning of Demotion, Separation, Suspension, Redundancy, Retrenchment, Lay Off, (Meaning only) **Wage and Salary Administration:** Nature and Purpose, Compensation, Reward, Wage levels and Wage Structures, Minimum, Fair and Living Wage, Basic Kinds of Wage Plan, Ingredients of a Good Wage Plan, Types of Wages, Wage Differentials, Executive Compensation. **Rewards and Incentives:** Meaning and Features, Types of Rewards, Wage Incentives – Meaning and Objectives **Employee Benefits and Service:** Terminology and Meaning, Special Features of Fringe Benefits, Objectives & Classification of Fringe Benefit **Management of Grievances:** Meaning, Causes and Needs of Grievance Procedure. **Industrial Relations:** Definition, Objectives and Participants in Industrial Relations **Resolving Disputes:** Meaning, Causes & Settlement of Disputes, Method of Disputes Settlement (Meaning Only).

**Practical:**

Case Study on Human Resource Management, Case Study on Job Analysis, Job Description & Job Specification, Case Study on Manpower Planning, Case Study on Recruitment, Case Study on Selection, Case Study on Induction, Case Study on Training, Case Study on Management Development, Case Study on Performance Appraisal, Case Study on Employee Compensation, Case Study on Employee Benefits, Case Study on Rewards and Incentives, Case Study on Grievances Management.

**Teaching Schedule- Theory with weightages (%):**

Lecture	Topic	Subtopic	Weightage
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No.			(%)
1, 2	Human Resources Management	Definition, Nature, Scope and objectives of HRM, Difference between HRM and PM, Importance of HRM, The changing environment of HRM, The changing role of HRM	7
3, 4	HRP / Manpower Planning	Definition, Need HRP Career Planning and Succession Planning	5
5, 6, 7	Job Analysis	Job Terminology: Task, Position, Job, Occupation., Job Rotation, Job Enlargement, Job Enrichment (Definition only), Definition, Purpose and Uses of job Analysis, Process of Job Analysis, Job Description: Definition and Components Job Specification: Definition and Components	7
8, 9	Recruitment	1. Meaning, Process of Recruitment 2. Sources of Recruitment 3. Internal versus External Recruitment: Advantages and Disadvantages	7
10, 11	Selection	1. Meaning and Process of Selection 2. Selection Tests: Types Interview: Meaning, Objectives and Types	7
12, 13	Induction	1. Induction: Meaning, Purpose. 2. Strategic Choice of Orientation 3. Induction Programme 4. Problems of Orientation	5
14	Placement	Placement: Meaning, Problems	5
15, 16, 17	Training, Development and Career Management	1. Three Terms: Training, Development and Education 2. The Benefits of Training 3. The Training Process 4. Methods of Training 5. Impediments of Effective Training Career Development	7
20, 21	Performance Appraisal	1. Nature and Objectives of Performance Appraisal 2. Performance Appraisal and Competitive Advantage 3. Methods of Performance Appraisal	7
22, 23	Promotion, Transfers, Separation	1. Meaning and Types of Promotion 2. Meaning and Types of Transfers 3. Meaning of Demotion, Separation, Suspension, Redundancy, Retrenchment, Lay Off, (Meaning only)	5
24, 25	Wage and Salary	1. Nature and Purpose	7

	Administration	2. Compensation, Reward, Wage levels and Wage Structures 3. Minimum, Fair and Living Wage 4. Basic Kinds of Wage Plan 5. Ingredients of a Good Wage Plan 6. Types of Wages 7. Wage Differentials 8. Executive Compensation	
26, 27	Rewards and Incentives	1. Meaning and Features 2. Types of Rewards 3. Wage Incentives – Meaning and Objectives	5
28, 29	Employee Benefits and Service	1. Terminology and Meaning 2. Special Features of Fringe Benefits 3. Objectives of Fringe Benefit 4. Classification of Fringe Benefits	5
30	Management of Grievances	1. Meaning 2. Causes of Grievances 3. Need for Grievance Procedure	5
31	Industrial Relations	1. Definition and Objectives of IR 2. Participants in IR	5
32	Resolving Disputes	1. Meaning and Causes of Disputes 2. Settlement of Disputes 3. Method of Disputes Settlement (Meaning only)	5

### Practical Exercises:

Exercise No.	Title
1	Case Study on Human Resource Management
2 & 3	Case Study on Job Analysis, Job Description & Job Specification
4	Case Study on Manpower Planning
5	Case Study on Recruitment
6	Case Study on Selection
7	Case Study on Induction
8 & 9	Case Study on Training
10	Case Study on Management Development
11	Case Study on Performance Appraisal
12	Case Study on Employee Compensation
13	Case Study on Employee Benefits
14	Case Study on Rewards and Incentives
15 & 16	Case Study on Grievances Management

### Suggested readings:

**1) Text Book:**

1. K. Ashwathappa- Human Resource and Personnel Management- Tata McGraw Hill Publishing Co. Ltd.
2. . C. B. Mamoria and S. V. Gankar Personnel Management Text & Cases
3. Performance Appraisal, Theory & Practice- AIMA- Vikas Management Series, New Delhi- 1986.

**2) Reference Books:**

1. *Dr. Anjali Ghanekar* Human Resource Management...
2. Dr. C. B. Gupta- Sultan and Sons Human Resource Management-.

**3) e-books:**

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