

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

**SEMESTER-IV**

<b>Sr. No</b>	<b>Course Code</b>	<b>Course Category</b>	<b>C</b>	<b>IM</b>	<b>EM</b>	<b>TM</b>	<b>Title of the Subject</b>
1	16070102040100	Foundation-4	2	30	70	100	Rural Industrialization
2	16070202040200	Core-4	2	30	70	100	1. Agronomy-4
	16070202040300		2	30	70	100	2. Horticulture & Forestry -4
	16070202040400		2	30	70	100	3. Animal Husbandry-4
	16070202040500		2	30	70	100	4. Rural Extension-4
	16070202040600		2	30	70	100	5. Rural Economics-4
3	16070302040700	Elective-10	2	30	70	100	1. Value Addition in Agriculture produce
	16070302040800		2	30	70	100	2. Theories of Economic Development
	16070302040900		2	30	70	100	3. Animal Care and Handling
4	16070402041000	Elective-11	2	30	70	100	1. Gandhian approach to rural development
	16070402041100		2	30	70	100	2. Agri. Business Management
	16070402041200		2	30	70	100	3. Managerial Economics
5	16070502041300	Elective-12	2	30	70	100	1. Biotechnology in Plants and Animals
	16070502041400		2	30	70	100	2. Integrated Insect Management
	16070502041500		2	30	70	100	3. Agriculture Processing And Marketing

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Foundation-4	16070102040100	Rural Industrialization	2	30	70	--	2.5 Hrs

**Title:** - Rural Industrialization

### **Objectives:-**

1. To understand – about importance of Rural Industrialization.
2. To Familiarize with government policy of rural industry.
3. To understand the Gandhian thought of rural Development.
4. To know the problems and remedial measures of rural industrialization.

### **Theory :**

**100%**

#### **Unit : 1**

Meaning, Importance and objectives of rural industrialization, importance Of Agriculture in Rural Industrialization.

20 %

#### **Unit : 2**

Small and Rural Industries - meaning, importance, Benefits, problems and Measures.

20 %

#### **Unit : 3**

Gandhian Approach about Rural Industries and Rural Development.

20 %

#### **Unit : 4**

Government policy about small and rural Industries, small sector industrial Policy.

20 %

#### **Unit : 5**

Dimensions of the problems of Industrial sickness – Factors responsible for Industrial sickness in small and medium enterprises.

20 %

### **References :-**

1. Ruddar Datt and K. P. M. Sundharam - Indian Economics – S. Chamd & Co. Ltd. Delhi.
2. C. M. Chaudhary – Rural Economics – Subline publications, Jaipur.
3. A. N. Agrawal, Khndan Lal – Agri. Problems of India – Vikas Publishing House Pvt. Ltd.

4. Vasant Desai – Fundamentals of Rural Development.
5. Shree shreemannarayangi – Relevance of Gandhian Economics.
6. Bhagwati J & P Desai – India Planning for Industrialization.
7. ભારતનું કૃષિક્ષેત્ર - વિકાસ એક પડકારો - ડૉ. ભાષ્કર જોષી - યુની. ગ્રંથ ની. બોર્ડ.

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Core - 4	16070202040200	Agronomy -4	2	30	70	--	2.5 Hrs

**Title:** Project Work and Dissertation / Thesis

### **Objectives:**

- 1.To study the preparation of project proposal
- 2.To understand the project execution
- 3.To develop the skill about data collection from the field of study
- 4.To study about the analysis of data
- 5.To study the preparation of dissertation / thesis and how to draw the conclusion

### **Syllabus:**

1. Institutional training (Placement) programme of 15 days is compulsory for all students during this semester and “S” grade (Satisfactory Grade) have to be earned by all students.
2. Selection of project, preparation of proposal and sanction of project concerning the course teacher.
3. Implementation of project work and data collection.
4. Data analysis and preparation of dissertation or thesis.
5. Submission of thesis / dissertation to course teacher at least 15 days before the commencement of semester end examination.
6. Project work and the thesis / dissertation may be prepared by an individual student or in a group of 5 students maximally.
7. A term paper on the topic given by the course teacher has to be prepared by all students individually.

### **Distribution of marks:**

#### **1. Internal Assessment:**

Internal assessment shall include following three criteria to evaluate a student:

1. Identification and selection of a problem for project work and preparation of project proposal

- 10 Marks

2. Interest in work, devotion, progressiveness, sincerity and library work -10 Marks
3. Term paper. -10 Marks

Above all three components will be evaluated by the respective course teacher.

**2. External Assessment:**

The external evaluation of a student shall be made by a panel of two teachers- One will be the course teacher and second will be a subject expert from the same or other college.

PANEL	VIVA- VOICE	DISSERTATION/THISIS	TOTAL
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Core - 4	16070202040300	Horticulture & Forestry - 4	2	30	70	--	2.5 Hrs

**Title:** Project Work and Dissertation / Thesis

### **Objectives:**

- 1.To study the preparation of project proposal
- 2.To understand the project execution
- 3.To develop the skill about data collection from the field of study
- 4.To study about the analysis of data
- 5.To study the preparation of dissertation / thesis and how to draw the conclusion

### **Syllabus:**

1. Institutional training (Placement) programme of 15 days is compulsory for all students during this semester and “S” grade (Satisfactory Grade) have to be earned by all students.
2. Selection of project, preparation of proposal and sanction of project concerning the course teacher.
3. Implementation of project work and data collection.
4. Data analysis and preparation of dissertation or thesis.
5. Submission of thesis / dissertation to course teacher at least 15 days before the commencement of semester end examination.
6. Project work and the thesis / dissertation may be prepared by an individual student or in a group of 5 students maximally.
7. A term paper on the topic given by the course teacher has to be prepared by all students individually.

### **Distribution of marks:**

#### **1Internal Assessment:**

Internal assessment shall include following three criteria to evaluate a student:

1. Identification and selection of a problem for project work and preparation of project proposal

- 10 Marks

2. Interest in work, devotion, progressiveness, sincerity and library work -10 Marks
3. Term paper. -10 Marks

Above all three components will be evaluated by the respective course teacher.

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The external evaluation of a student shall be made by a panel of two teachers- One will be the course teacher and second will be a subject expert from the same or other college.

PANEL	VIVA- VOICE	DISSERTATION/THISIS	TOTAL
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Core - 4	16070202040400	Animal Husbandry - 4	2	30	70	--	2.5 Hrs

**Title:** Project Work and Dissertation / Thesis

### **Objectives:**

1. To study the preparation of project proposal
2. To understand the project execution
3. To develop the skill about data collection from the field of study
4. To study about the analysis of data
5. To study the preparation of dissertation / thesis and how to draw the conclusion

### **Syllabus:**

1. Institutional training (Placement) programme of 15 days is compulsory for all students during this semester and "S" grade (Satisfactory Grade) have to be earned by all students.
2. Selection of project, preparation of proposal and sanction of project concerning the course teacher.
3. Implementation of project work and data collection.
4. Data analysis and preparation of dissertation or thesis.
5. Submission of thesis / dissertation to course teacher at least 15 days before the commencement of semester end examination.
6. Project work and the thesis / dissertation may be prepared by an individual student or in a group of 5 students maximally.
7. A term paper on the topic given by the course teacher has to be prepared by all students individually.

### **Distribution of marks:**

#### **Internal Assessment:**

Internal assessment shall include following three criteria to evaluate a student:

1. Identification and selection of a problem for project work and preparation of project proposal - 10 Marks
2. Interest in work, devotion, progressiveness, sincerity and library work -10 Marks
3. Term paper. -10 Marks

Above all three components will be evaluated by the respective course teacher.



**2External Assessment:**

The external evaluation of a student shall be made by a panel of two teachers- One will be the course teacher and second will be a subject expert from the same or other college.

<b>PANEL</b>	<b>VIVA- VOICE</b>	<b>DISSERTATION/THISIS</b>	<b>TOTAL</b>
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Core - 4	16070202040500	Rural Extension - 4	2	30	70	--	2.5 Hrs

**Title:** Project Work and Dissertation / Thesis

### **Objectives:**

- 1.To study the preparation of project proposal
- 2.To understand the project execution
- 3.To develop the skill about data collection from the field of study
- 4.To study about the analysis of data
5. To study the preparation of dissertation / thesis and how to draw the conclusion

### **Syllabus:**

1. Institutional training (Placement) programme of 15 days is compulsory for all students during this semester and “S” grade (Satisfactory Grade) have to be earned by all students.
2. Selection of project, preparation of proposal and sanction of project concerning the course teacher.
3. Implementation of project work and data collection.
4. Data analysis and preparation of dissertation or thesis.
5. Submission of thesis / dissertation to course teacher at least 15 days before the commencement of semester end examination.
6. Project work and the thesis / dissertation may be prepared by an individual student or in a group of 5 students maximally.
7. A term paper on the topic given by the course teacher has to be prepared by all students individually.

### **Distribution of marks:**

#### **1.Internal Assessment:**

Internal assessment shall include following three criteria to evaluate a student:

- 1.Identification and selection of a problem for project work and preparation of project proposal - 10 Marks
- 2.Interest in work, devotion, progressiveness, sincerity and library work -10 Marks
- 3.Term paper. -10 Marks

Above all three components will be evaluated by the respective course teacher.

## **2.External Assessment:**

The external evaluation of a student shall be made by a panel of two teachers- One will be the course teacher and second will be a subject expert from the same or other college.

<b>PANEL</b>	<b>VIVA- VOICE</b>	<b>DISSERTATION/THISIS</b>	<b>TOTAL</b>
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Core - 4	16070202040600	Rural Economics - 4	2	30	70	--	2.5 Hrs

**Title:** Project Work and Dissertation / Thesis

**Objectives:**

- 1.To study the preparation of project proposal
- 2.To understand the project execution
- 3.To develop the skill about data collection from the field of study
- 4.To study about the analysis of data
- 5.To study the preparation of dissertation / thesis and how to draw the conclusion

**Syllabus:**

1. Institutional training (Placement) programme of 15 days is compulsory for all students during this semester and “S” grade (Satisfactory Grade) have to be earned by all students.
2. Selection of project, preparation of proposal and sanction of project concerning the course teacher.
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**Distribution of marks:**

**1.Internal Assessment:**

Internal assessment shall include following three criteria to evaluate a student:

1. Identification and selection of a problem for project work and preparation of project proposal - 10 Marks
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3. Term paper. -10 Marks

Above all three components will be evaluated by the respective course teacher.

## **2.External Assessment:**

The external evaluation of a student shall be made by a panel of two teachers- One will be the course teacher and second will be a subject expert from the same or other college.

<b>PANEL</b>	<b>VIVA- VOICE</b>	<b>DISSERTATION/THISIS</b>	<b>TOTAL</b>
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 10	16070302040700	Value Addition in Agriculture Produce	2	30	70	--	2.5 Hrs

### **Title: - Value Addition in Agriculture produce**

#### **Objectives:-**

1. To aware with importance of value importance
2. Student gets knowledge of different preservation techniques.
3. To study about export policy and quality of horticultural crops

#### **Theory: -**

100%

#### **Unit: 1. Value addition**

20%

1. Importance
2. different method to value addition in product (a. grading, b. processing c. packing d. packing e. cold storage f. certification g. biotechnology)
3. Factor affecting in value addition
  - a. technology b. quality c. demand and supply d. infrastructural facility e. processing unit f. market g. consumer h. government policy i. tax j. use of information technology

#### **Unit: 2. Value addition in fruit crop**

30%

1. Importance and different methods of fruit preservation
2. Value added product ( a. Pickle, juice bottling, powder - mango, date palm etc. b. Jam, jelly –guava, papaya apple etc. c. Wafer – chiku banana etc.d. Dried fruit-grape )

#### **Unit: 3. Value addition in vegetables**

20%

1. Importance and different methods preservation
2. Value added product (pickles, souas, soup, ketchup, wafer, onion powder.)

#### **Unit: 4. Value addition flower.**

10%

1. importance and different method
2. value addition like; Cut flower, perfumes, dehydration,etc

1. Importance.

2. Point to be note for export of fruit

(A. Variety B. selection of garden C. Harvesting D. Transportation E. Sorting F. Grading G. Cleaning H. Treatment I. Packing J. Pre cooling K. Intermediate Storage. L. Container M. Shipping N. Process of export in some major fruit crops. (a) Chiku (b) Banana (c) mango.)

### **References**

(1) “ Fal ane Ful ” (Gujrati edition- march 2015 )

- pub.: Directore of extension education, S.S.K., J.A.U. – Junagadh.

(2) “ Falpako ” (Gujrati edition- march 2013)

- pub.: Directore of extension education, A.A.U. Anand.

(3) “ Fal visheshank ” (Gujrati edition)

pub.: “Krushigovidya”, Anand Kendra, (G.A.U.) – Anand

(4) “ Shakhaji pako ni kheti” (Gujrati edition- Dec. 2013 )

- pub.: Directore of extension education, S.S.K., J.A.U. – Junagadh.

(5) “ Ful visheshank ” (Gujrati edition –January 2004)

pub.: “Krushigovidya”, Anand Kendra, (G.A.U.) – Anand

(6) “ Shakhaji ” (Gujrati edition may-2009)

- pub.: Directore of extension education, A.A.U. Anand.

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 10	16070302040800	Theories of Economic Development	2	30	70	--	2.5 Hrs

**Title :-** Theories of Economic Development

**Objectives :-**

1. To know the characteristics of Economic Development.
2. To know the various theories of Economic Development.
3. To know the factor effecting Economic Development.

**Theory :** 100%

**Unit : 1** Meaning and Definitions of Economic Growth and Development. Indicators Of Development factors of Economic Growth. 20 %

**Unit : 2** Theories of Economic Development – Adaw smith, ricardian theooy, Schumpeterian theory. 20 %

**Unit : 3** Theories of Economic Development the Keynesian theory, Rostow's stages Of Economic Growth. 20 %

**Unit : 4** Economic Development - population and institution – Effect of population Growth on Economic Development. The Theory of Demographic Transition. 20 %

**Unit : 5** Meaning and importance of human capital formation, problems of human capital Formation. Criterion of investment in human capital. Entrepreneurship in Economic Development. Role of the state in economic development. 20 %

**References :-**

1. Adelman T. – Theories of Economic growth and Development.
2. Ghatak S. – Economic Development.
3. Myinl – Economic Theory and Un Development Cowuntries.
4. Thirwal A. P. – Growth and Development.



5. Reo V. K. R. V. – Essays in Economic Development.
6. Ruddar Datt, K. P. M. Sundharam – Indian Economy – S. Chand & Co. Ltd. Delhi.
7. Chatak S. An introduction to Development Economics.

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 10	16070302040900	Animal Care and Handling	2	30	70	--	2.5 Hrs

**Title:** - Care and Handling of animals

### **Objectives:-**

1. To learn how to approach an animal.
2. To learn about how to control an animal
3. To understand the importance of routine procedures on the farm.
4. To understand the importance of care and management of different classes of animal.

**Course:-** **100%**

**Unit:-1.** Casting of animals 20%

- 1.1 Different casting methods.
- 1.2 Purposes of casting.

**Unit:-2.** Animal Handling and care. 25%

- 2.1 Dairy colt rearing: Systems and essential steps.
- 2.2 Care and management of at different stage like pregnancy, Lactation and Parturition.

**Unit:-3.** Routine Procedures of farm 25%

- 3.1 Castration
- 3.2 Training to young bulls.
- 3.3 Application of nose-ring.
- 3.4 Dehorning.

**Unit:-4** Care during transportation. 15%

- 4.1 Transportation of chicks.
- 4.2 Transportations of broilers.

**Unit:-5.** Bull handling: 15%

-Handling, Casting, Training. And polishing of breeding bulls

### **Reference:-**

1. A text book of animal husbandry -by G.C Banerjee
2. A text book of animal husbandry – ICAR

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 11	16070402041000	Gandhian Approach to Rural Development	2	30	70	--	2.5 Hrs

**Title:** - Gandhian Approach to Rural Development

**હેતુઓ:-**

- (૧) વિદ્યાર્થીઓ ગાંધીજીના ગ્રામોદ્ધારના ખ્યાલ વિશે માહિતી મેળવે.
- (૨) વિદ્યાર્થીઓ ગાંધીજીનું અર્થદર્શન સમજે.
- (૩) વિદ્યાર્થીઓ ગાંધીજીના આદર્શો અને વિચારો વિશેની સમજ કેળવશે.
- (૪) વિદ્યાર્થીઓ ગાંધીજીના કેળવણીના વિચારોથી પરીચિત થાય.

**અભ્યાસક્રમ**

**એકમ :- ૧** ગ્રામોદ્ધાર માટે ગાંધીજીના પ્રયાસો.

૨૦ %

- (૧) ગ્રામ્ય જીવનનું અવલોકન.
- (૨) સ્વચ્છતાની કેળવણી.
- (૩) ગ્રામ સેવકનો ધર્મ.
- (૪) સહકારી પશુપાલન.

**એકમ :- ૨** ગાંધીજીનું અર્થદર્શન.

૨૦ %

- (૧) પુર્ણ રોજગારી
- (૨) મજુર પ્રવૃત્તિ.
- (૩) જાત મહેનત.

**એકમ :- ૩** આર્થિક સમાનતા દ્વારા ગરીબ નિવારણ.

૨૦ %

- (૧) વાલીપણાનો (ટ્રસ્ટીશીપનો) સિધ્ધાંત.
- (૨) યંત્રો પ્રત્યેનો અભિગમ.
- (૩) સ્ત્રી ઉન્નતિ.

એકમ :- ૪ ગાંધીજીના આદર્શો અને વિચારોનું ઘડતર.

૨૦ %

- (૧) સ્વદેશીની ભાવના.
- (૨) પરદેશી કાપડનો બહિષ્કાર.
- (૩) ખાદી માટે પ્રચાર.
- (૪) ખાદી અને ગ્રામોદ્યોગ.

એકમ :- ૫ ગાંધીજીના કેળવણી વિષયક વિચારો.

૨૦ %

- (૧) કેળવણી વિષયક વિચારોનો વિકાસ.
- (૨) ઋણ અવસ્થા
- (૩) પ્રથમ અવસ્થામાં ટોલ્સટોય ફાર્મ, ઘરશાળા, ઉત્પાદકશ્રમ, બૌદ્ધિક કેળવણી, અક્ષરજ્ઞાન અને ચારિત્ર ગઠન,
- (૪) બીજી અવસ્થામાં વિદ્યાપીઠ, અસહકાર અને શિક્ષણ, સા વિધ્યા વિમુક્ત્યે ઉદ્યોગ, સ્વાવલંબન, શિક્ષણકળા, રચનાત્મક કળાનો સમય વગેરે.
- (૫) ત્રીજી અવસ્થામાં ઉદ્યોગ દ્વારા શિક્ષણ, બાળ સ્વભાવ અને કામ, મન વચન કર્મ એકતા, વ્યક્તિત્વ વિચાર કળા ઈન્દ્રીય કેળવણી, સત્યમ્ શિવમ્ સંદરમ્ વગેરે

સદર્ભ ગ્રંથો:-

૧. ગાંધીજીનું અર્થદર્શન - વિઠ્ઠલદાસ મગનલાલ કોઠારી
૨. ગાંધીવાદી જીવનદર્શન અને અર્થ વ્યવસ્થા - રમેશભાઈ બી. શાહ
૩. ગાંધીજીનું ધર્મદર્શન - મગનભાઈ જી. પટેલ
૪. સમાજ સુધારણામાં ગાંધીજીનું પ્રદાન - અંજના બી.શાહ
૫. ક્રાંતિકારી ગાંધી - રામનારાયણ નાગરદાસ પાઠક

## Faculty of Rural Studies

Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 11	16070402041100	AGRI BUSINESS MANAGEMENT	2	30	70	--	2.5 Hrs

**Title:** - AGRI BUSINESS MANAGEMENT

### Objectives

1. To develop an understanding of the underlying concept
2. To develop an understanding of the strategies and the issues involved in the exchange of products and services between the companies and rural markets
3. To develop an understanding of the strategies and the issues involved rural products to consumers.

**Course:** **100%**

**UNIT-1** Soils and Crop Management: 30%

-Soil Testing and Fertilizer use

-Integrated Plant Nutrition Management (IPNM)

-Integrated Pest Management (I.P.M.),

-Seed Production and Seed Technology

-Bio Composting: Nadep, C.P.P. Vermi-Compost, C.H.M. Heap Compost, P.S.B.Culture, Rhizobium Culture, B.G.A., Azotobactor,

-Bio Agents, Trico derma, Viveria Vasiana, Trico cards, Neem cake, Pheromantrape,

Horticultural Crop Management: Advance Farming Systems:

Nursery Management, Machan Farming, Staking, Mushroom Cultivation, Post Harvest, Zero Energy Cool Chamber, Onion Storage, IPM & IPNM in major fruit and vegetable crops.

Animal Husbandry and Dairy Management:

Green Fodder, Urea Treatment of Straw, Beekeeping, Goatory UNIT, Milk Group, Hygienic Milk Production, Milk Cooperative.

**UNIT -2** Agricultural Marketing: 20%

-Agro Marketing: Definition and Meaning, Marketing System, Importance of Agricultural Marketing, Advantages of Agri Marketing, Marketing Functions and Channels.

- Classification of Marketing:

i. Regulated Markets,

ii. Cooperative Markets.

<b>UNIT- 3</b>	Agri. Cooperatives	20%
	<p>Cooperation: Introduction, Meaning, Definition, Need and Importance, Principles, Development of Agricultural Co-operation and its Role and Importance and functions. Structure of Cooperation in India: Kinds of cooperative societies and Self Help Groups, Farmers' Interest Group</p> <p>Critical Analysis of Indian Cooperative Movement; Advantages of cooperative Movement, Weakness of Cooperative Movement, State Aid Control and Cooperative Movement, Efforts of Central Government for the Improvement of co- operative Sector</p>	
<b>UNIT-4</b>	Agro Export	20%
	<ul style="list-style-type: none"> <li>- Concept of Export as Agro Business.</li> <li>- Agri Export Policies</li> <li>- Versus Export Value of cereals and other Agricultural Commodities</li> </ul>	
<b>UNIT –5</b>	Agro Business Management Case Studies	10%

**Books:**

- 1.Rural Marketing Mgt.: Raja Gopal (Discovery Publications)
- 2.Marketing Mgt: Philip Kilter
- 3.Marketing Mgt: T.N.Chhabra
- 4.Principles of Marketing: Armstrong & Kotler

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Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 11	16070402041200	Managerial Economics	2	30	70	--	2.5 Hrs

**Title:** - Managerial Economics

### **OBJECTIVE:**

1. To provide the students an appreciation of the use of the concepts and tools of economic analysis in relation to managerial decision-making.
2. To enable them to understand the economic forces governing industry and business.
3. To develop managerial decision-making power.

**Course:** **100%**

**UNIT-1**      **INTRODUCTORY:** 20%

Scope and Method of Managerial Economics, Five Fundamental concepts, The Incremental concept, Time perspective, and Discounting Principle, Role and responsibilities of Managerial Economist

**UNIT- 2**      **DEMAND ANALYSIS:** 20%

Basic concepts of Demand Utility Analysis, Budget Line, Price, Income and substitution effects, Law of Demand, Demand Function, Elasticity of Demand, Demand Forecasting

**UNIT- 3** **PRODUCTION AND COST ANALYSIS** 20%

Production Function, Laws of Variable Proportions, Returns to Scale, Iso-product curves, Classification of costs.

**UNIT-4** **MARKET STRUCTURE AND PRICING** 20%

Perfect competition, Monopoly, imperfect Competition, Pricing under different Market structure Price discrimination

**UNIT-5** **PROFIT MANAGEMENT:** 20%

Nature and concept of Profit, Measurements of Profit, Concept of Risk and uncertainty Theories of Profit Planning and Forecasting Profit Policies.

### **Suggested Reading:**

1. G.S.Gupta.                      Managerial Economics
2. D.N.Dwivedi                    Managerial Economics
3. Salvatore Dominick          Managerial Economics in global Economy
4. Adhikari                          Managerial Economics
5. Peterson and Levis            Managerial Economics

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Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 12	16070502041300	Biotechnology	2	30	70	--	2.5 Hrs

**Title:** - Biotechnology

**Objectives:**

1. the student make familiar to tissue culture technique and its use in agriculture
2. students should know about biotechnology and also about B.T. cotton
3. students should aware about cloning technique and also about multiple ovulation and E.T.

**Unit:-1 Tissue culture**

20%

What is tissue culture?  
 Methods of tissue culture  
 General procedure to raise a plant by cell culture  
 Use of tissue culture in agriculture

**Unit:-2 B.T. Seeds**

30%

What is B.T Seeds?  
 Use of B.T Seeds in Crop Production  
 Merits and demerits of B.T Seeds  
 Use of Bio – technology in crop Production

**Unit:-3**

10%

Bio – technology in Animal Husbandry  
 Introduction  
 Use in Animal Husbandry.

**Unit: - 4 Cloning:**

20%

Methods of Conning  
 Uses of Conning  
 Conning Method of “Dolly” Sheep  
 Production

**Unit:-5 Multiple ovulation and embryo transfer (MOET)**

20%

Multiple ovulation and its Uses  
 Advantage of M.D.E.T  
 Transgenic animal and Genetic  
 Engineering



**References:-**

1. Jamin Vigyan and Vyavastha (guj. Ed.)  
- Babubhai Avarani.
2. Pragatishil kheti (guj. Ed.)  
- Pub. By Sardar Smruti Kendra,  
- Junaghdh Agri. Uni . Junaghdh
3. Veterinary Obstetrics and Gynecology.  
- Kodagali and Bhuj.
4. Bio – technology vishheshnk (Godarshan)  
- Guj .Ed.

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Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 12	16070502041400	Integrated Insect Management	2	30	70	--	2.5 Hrs

Title:- Integrated Insect Management

### Objectives:-

1. Students should be aware about insects, its structure, lifecycle and control measure
2. Introduction to plant diseases, its causes, symptoms in plants and principles of disease control to the students
3. The student should know about weed, its disadvantages, dispersal, classification and control measures.

### Courses:-

100%

**Unit-1** Structure of insect, lifecycle of insect and its feeding habit.

10%

**Unit-2** Characteristics for survival of insects on the earth.

10%

**Unit-3** Methods of insect control:

40%

3.1 Natural methods of insect control

3.2 Artificial methods of insect control

3.2.1 Physical and mechanical methods of insect control

3.2.2 Cultural methods of insect control

3.2.3 Legal methods of insect control

3.2.4 Biological methods of insect control

3.2.5 Chemical methods of insect control

3.2.6 Integrated insect management

**Unit-4** Classification ,characteristics, formulations trade names of Insecticides.

20%

**Unit-5** Marks of identification, nature of damage, host range, metamorphosis, life cycle and integrated insect control of insects like; Heliothis, prodenia, Aphids, jassids, Thrips, Surface grass-hopper, Whitegrub, whitefly and Fruitfly.

20%

### References:-

1. Principles and procedures of plant protection  
-S.B. Chattopadhyay
2. Insect-pest of crop  
-S.Pradhan
3. Biology of insect  
-S.C. Saxena
4. General Entomology  
- M.S. Mani
5. Sampurna Pak Sanrakshan Part-I ( Gujarati Edition)  
- Babubhai Avarani

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Name of Course	Semester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	IV	Elective - 12	16070502041500	Agri. Processing & Marketing	2	30	70	--	2.5 Hrs

**Title :-** Agri. Processing & Marketing

**Objectives :-**

1. To know the relationship between the Agri. Products and price.
2. To Acquire knowledge about the Agri. Marketing mechanism.
3. To understand the importance of Agri. Products processing.
4. To identify the limitations of Agri. Marketing & Processing and to think About the remedial measures.

**Theory :** **100%**

**Unit : 1** Market – meaning and types, contribution Agri. Marketing in Agri. Development. 20 %

**Unit : 2** Present state of Agricultural Marketing in India, Different between Agri. Product and Industrial product market, limitation of Agriculture marketing in India. 20 %

**Unit : 3** Step taken to improve Agri. Marketing, Regulated Market, Co. Operative Marketing. 20 %

**Unit : 4** Determination of Price of Agri. Product, Market Mechanism, cobweb theorem, Price and output Relationship. 20 %

**Unit : 5** Contribution of Agri. Processing in Agri. Development, scope and problems of Agro – industry, remedial measured. 20 %

## References :-

1. Ruddar Datt, K. P. M. Sundharam, Indian Economics – S. Chand & Co. Ltd. Delhi.
2. Sundhram I. S. Rural Development.
3. P. C. Bansal – Economic problems of Indian Agri – CBS public – shers & Dist. Delhi.
4. A. N. Agarwal / Khndawal – Agri. Problems of India – Vikas Publishing Tiouse Pvt. Ltd.
5. ડૉ. ભાષ્કર જોષી - ભારતનું કૃષિક્ષેત્ર, વિકાસ અને પડકારો - યુનિ. ગ્રંથ ની. બોર્ડ.