

SAURASHTRA UNIVERSITY
P. G. (M.R.S.) CENTER
SAURASHTRA UNIVERSITY – RAJKOT
Choice Based Credit System (CBCS) Course
OF
MASTER OF RURAL STUDIES

VISION :-

The rural faculty of Saurashtra University receives inspiration for rural development in consonance with the vision of Mahatma Gandhi. The rural faculty is mandated to evolve, promote and impart higher education so as to take up emerging challenges for transformation of rural areas. It undertakes academic, research, extension and training programs for the empowerment of the people with a view to ensuring free flow of knowledge, techniques and technologies as a two-way process for betterment of rural life.

MISSION :-

- (1) To encourage rural graduates to take challenges for transformation of rural areas.
- (2) To build up villages by providing not only education but acquisition of knowledge, understanding and molding of individual through which economic social and cultural development of nation can be achieved.
- (3) To unit educational activities with rural problems through training (placement) and project work.
- (4) To provide youth leadership in relation to rural society with particular focus on extension, agriculture, animal husbandry, horticulture and rural cooperative services.
- (5) To promote research in the area of alternative sources of energy, qualitative improvement in rural product, inventing new tools and equipments for agriculture and dairy farming, eradication of rural unemployment, conducting experiments in traditional knowledge and science, preservation and propagation of the regional folk art forms and inculcation of social value.

Ordinances and Regulations :-

O.M.R.S. – 1 :

The Candidate for the degree of M.R.S. must have passed any of the following degrees with minimum 48% marks or equivalent grade point

1. B.R.S. / B. A. (Rural Studies) from this or any other university recognized by the University.
2. B.S.W. from the recognized University.
3. Graduates from Govt. approved Gram Vidyapeeth.
4. Graduates from Gujarat Vidyapeeth – Ahmedabad.
5. B.A. (Economics / Sociology)
6. B. Com.
7. B. Sc. (Agriculture)
8. B. Sc. (Horticulture)
9. B. V. Sc. & A. H.
10. Other Graduates equivalent to B.A. (Rural Studies)

Conditions :

1. A candidate possessing B. A. (Economics) or B.Com. Degree could select only 'Economics' as his / her Core Course.
2. A candidate possessing B. A. (Sociology) or B.S.W. degree can select only Rural Extension as his/her Core Course.
3. A candidate will select his/her Core course in M.R.S. as per his/her Core subject at Bachelor's degree only.
4. There will be a provision of one seat in each Core course of M.R.S. to get admission, which possesses the degree of B.R.S. (Rural Studies) or B.R.S. having Core Subject as English / Hindi / Gujarati.

O. M. R. S. – 2

Besides the candidates having the required qualifications as per O.M.R.S. – 1, sponsored candidate from Govt. / Semi Govt. / Grant – in – aid institutions and candidate from registered company or establishment, having any other qualification which can be considered as equivalent to graduation can be admitted provided that they fulfill the following conditions.

- (1) Employer of the said candidate will permit him / her for M.R.S. full time regular course for two consecutive years.

- (2) One who is second class / Grade graduate with 48% of marks or otherwise whose academic achievement is approved as equivalent to graduation by the Saurashtra University.

O. M. R. S. – 3

The M. R. S. (Master of Rural Study) programme being a full time course, a candidate can not join any other job or employment and cannot seek admission in any other courses / programme of this university or educational institution.

O. M. R. S. – 4

The candidates seeking admission in the M. R. S. (Master of Rural Study) have to participate in the labour work assigned to them.

O. M. R. S. – 5

The internal assessment for each semester will be conducted by the Head of the Department center and shall send the results of the same to the University, before commencement of the Semester End examination. The external (semester end) examinations of each semester will be conducted by the University.

O. M. R. S. – 6

The evaluation of each is divided into two parts: Internal and External evaluations. Out of total 100 marks for each course, the weightage of internal evaluation is 30 % and that of external evaluation is 70%.

O. M. R. S. – 7

To complete a term (semester) student should remain present out of total teaching days; a candidate must have minimum 80% attendance and should have completed labor work in each semester, to appear in the external examination.

O. M. R. S. – 8

The passing standard for M.R.S. is 40% in each head separately, i.e. for internal as well as for external evaluation.

O. M. R. S. – 9 Rules of promotion shall be as under :

- (1) From semester I to semester II, if a student undergoes a regular course of study of the semester I and fulfills the required criteria of attendance and secures minimum 40% marks in the internal assessment component of each course of Semester – I.
- (2) From semester II to semester III, if a student undergoes a regular course of study of the semester II and fulfills the required criteria of attendance and secures minimum 40% marks in the internal assessment component of semester II.
- (3) From semester III to semester IV, if a student undergoes a regular course of study of the semester III and fulfills the required criteria of attendance and secures minimum 40% marks in the internal assessment component of semester III and has cleared all the courses of Semester – I.

A candidate who fails in a semester, he/she shall be allowed for admission in the next semester as well as to appear in the examination of the next semester.

O. M. R. S. – 10

The final grade of the M.R.S. will be calculated on the basis of Cumulative Grade Point and Overall Grade Point System of Saurashtra University – Rajkot.

Regulations for Master of Rural Studies

R.M.R.S. – 01 : Internal Assessment

Internal assessment / evaluation will be made as per following :

The internal assessment would be made through out the semester by the department. The continuous internal assessment may have components like written test, oral tests, quizzes, assignments, seminars, presentations, projects and institutional visits and / or any combination of these. Regularity and attendance may also be assessed for marking. The proposed internal evaluation would comprise following components :

1. **Written test** = 10 marks: A test of one hour duration for each course will be conducted during each semester.
2. **Assignment / Presentation / Institutional visits** = 10 marks: Each student will have to prepare an assignment or has to present on the topic given by his/he course teacher or has to visit an institution and will be evaluated by the teacher, during each semester.

3. **Written Quiz** = 10 marks: During each semester, one quiz test will be conducted, during the respective period of subject only. This quiz test shall objective type of question only.

R.M.R.S. – 02 :

The candidates seeking admission in the M. R. S. have to participate in labor work assigned to them compulsorily during the tenure of their study.

R.M.R.S. – 03 : Course structure :

The syllabus of M. R. S. is divided in to four semesters and is of two years duration. Semester 1 and semester 2 are offered during first year and semester 3 and semester 4 are offered during second year. M. R. S. will be offered in alternate year basis.

The course M. R. S. comprises of total of twenty (20) courses. Semester I to IV comprises a total of five courses in each: one foundation course, one core course and three elective courses. The total evaluation of M.R.S. comprises of 2000 marks where in each course carries 100 marks.

The detailed evaluation, weekly periods, courses & weight of each semester are given in the course structure and in the respective courses.

R.M.R.S. – 04 :

The external evaluation of **Core – 4** will be done by a panel of two teachers: one of them will be a course teacher and the other one will be subject expert from the same or other college. The date and panel for the oral examination for above courses will be decided by the course teacher only and shall be made known to the university to issue orders.

Distribution of Marks for Core-4 (Semester – IV) :

- | | | |
|-------|--|------------|
| (1) | Internal assessment : | Marks = 30 |
| | Internal assessment shall include following three criteria to evaluate a student: | |
| (i) | Identification and Selection of a problem for project work and preparation of project proposal | = 10 marks |
| (ii) | Interest in work, devotion, responsiveness, sincerity and library work | = 10 marks |
| (iii) | Term paper | = 10 marks |

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

(2) External Assessment :

Marks = 70

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 with equal mark sharing.

<u>PANEL</u>	<u>VIVA VOCE</u>	<u>DISSERTATION /</u> <u>THESIS</u>	<u>TOTAL</u>
Member – 1 (Course Teacher) :	20	+ 15	= 35
Member – 2 (Subject Expert) :	20	+ 15	= 35

R.M.R.S. – 05 : The course structure, credits, maximum marks, course short code and title of each course of Master of Rural Studies are given below :

5.1 Following are the subjects prescribed for M. R. S. programme teaching and examination scheme.

MASTER OF RURAL STUDIES
THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR
SEMESTER-I

Sr No.	Course Code	Course Category	C	IM	EM	TM	Course Title
1	16070102010100	Foundation-1	2	30	70	100	Rural Technology
2	16070202010200 16070202010300 16070202010400 16070202010500 16070202010600	Core-1	2 2 2 2 2	30 30 30 30 30	70 70 70 70 70	100 100 100 100 100	1.Agronomy-1 2. Horticulture & Forestry -1 3. Animal Husbandry-1 4. Rural Extension-1 5. Rural Economics-1
3	16070302010700 16070302010800 16070302010900	Elective-1	2 2 2	30 30 30	70 70 70	100 100 100	1. Water Resource Management 2. Pomology 3. Philosophy and Contents of Extension
4	16070402011000 16070402011100 16070402011200	Elective-2	2 2 2	30 30 30	70 70 70	100 100 100	1. Concept of social reconstruction 2. Rural development in India 3. Olericulture
5	16070502011300 16070502011400 16070502011500	Elective-3	2 2 2	30 30 30	70 70 70	100 100 100	1. Natural Recourses and Management 2. Sociology of Tribal Society 3. Reproduction in Farm Animals

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-II

Sr No	Course Code	Course Category	C	IM	EM	TM	Course Title
1	16070102020100	Foundation-2	2	30	70	100	Rural Development
2	16070202020200	Core-2	2	30	70	100	1. Agronomy-2
	16070202020300		2	30	70	100	2. Horticulture & Forestry -2
	16070202020400		2	30	70	100	3. Animal Husbandry-2
	16070202020500		2	30	70	100	4. Rural Extension-2
	16070202020600		2	30	70	100	5. Rural Economics-2
3	16070302020700	Elective-4	2	30	70	100	1. Poultry Production
	16070302020800		2	30	70	100	2. Leadership in Extension Education
	16070302020900		2	30	70	100	3. Forestry
4	16070402021000	Elective-5	2	30	70	100	1. Computer application
	16070402021100		2	30	70	100	2. Floriculture
	16070402021200		2	30	70	100	3. Personality Development
5	16070502021300	Elective-6	2	30	70	100	1. Study of Greats
	16070502021400		2	30	70	100	2. English
	16070502021500		2	30	70	100	3. Economics of Cooperation

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-III

Sr No	Course Code	Course Category	C	IM	EM	TM	Course Title
1	16070102030100	Foundation-3	2	30	70	100	Scientific and Technical Writing
2	16070202030200	Core-3	2	30	70	100	1. Agronomy-3
	16070202030300		2	30	70	100	2. Horticulture & Forestry -3
	16070202030400		2	30	70	100	3. Animal Husbandry-3
	16070202030500		2	30	70	100	4. Rural Extension-3
	16070202030600		2	30	70	100	5. Rural Economics-3
3	16070302030700	Elective-7	2	30	70	100	1. Environmental Economics
	16070302030800		2	30	70	100	2. Crop Disease and Weed Control
	16070302030900		2	30	70	100	3. Rural Extension
4	16070402031000	Elective-8	2	30	70	100	1. Principals of Social Reconstruction
	16070402031100		2	30	70	100	2. Disaster Management
	16070402031200		2	30	70	100	3. Social Engineering
5	16070502031300	Elective-9	2	30	70	100	1. Research Methodology
	16070502031400		2	30	70	100	2. Rural Marketing Management
	16070502031500		2	30	70	100	3. N.G.O. Management

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-IV

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

R.M.R.S. – 06 : Awards of Grades, SGPA and CGPA

Credits, Grade Letter, Grade Points and Credit Points

6.1 Credit means the unit by which the course work is measured. In these Regulations : One credit means one hour of teaching work.

6.2 Grade Letter is an index to indicate the performance of a student in a particular course (Paper). It is the transformation of actual marks secured by a student in a course/paper. It is indicated by a Grade letter O, A, B, C, D, E, and F. There is a range of marks for each Grade Letter.

6.3 Grade Point is weight allotted to each grade letter depending on the marks awarded in a course / paper

Award of Grades :

Range of % of Marks	Grade Letter	Grade Point
90 to 100	O	10
80 to 89	A	9
70 to 79	B	8
60 to 69	C	7
50 to 59	D	6
40 to 49	E	5
1 to 39	F	4

6.4 Semester Grade Point Average (SGPA)

Credit Points for the course = No. of Credits assigned for the course x Grade Point secured for the course.

SGPA indicates the performance of a student in a given Semester. SGPA is based on the total credit points earned by the student in all the courses and the total number of credits assigned to the courses in a Semester.

Note : SGPA is computed only if the candidate passes in all the courses (gets a minimum 'E' Grade in all Courses)

The following examples illustrate the calculation of Grade Points, Credit Points and Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA). The percentage of marks shown in column III is the marks secured by the student in the Internal Evaluation and Semester End Examination put together.

Example : M. R. S.

SEMESTER – I

Course code	Credits	% of Marks	Grade Letter	Grade Point	Credit Points = Credits x Grade Points
16070102010100	2	60	C	7	2x7=14
16070202010200	2	50	D	6	2x6=12
16070302010700	2	70	B	8	2x8=16
16070402011000	2	75	B	8	2x8=16
16070502011300	2	65	C	7	2x7=14
Total	10				72

Total Credit Points = 72

Total Credits = 10

(M. FND = Foundation, M. Agro = Core Agronomy M. ELT = Elective)

Total Credit Points obtained for all the courses in the Semester – I = 72

Total Credit assigned to all the papers in the Semester – I = 10

SGPA = $\frac{\text{Total Credit Points in the Semester – I}}{\text{Total Credits in the Semester – I}} = 72/10 = 7.20$

Total Credits in the Semester – I

SGPA for SEMESTER – I = 7.20

Example : M. R. S.

SEMESTER – II

Course code	Credits	% of Marks	Grade Letter	Grade Point	Credit Points = Credits x Grade Points
16070102020100	2	70	B	8	2x8=16
16070202020200	2	50	D	6	2x6=12
16070302020700	2	70	B	8	2x8=16
16070402021000	2	75	B	8	2x8=16
16070502021300	2	45	E	5	2x5=10
Total	10				70

Total Credit Points = 70

Total Credits = 10

(M. FND = Foundation, M. AH = Core Animal Husbandry, M. ELT = Elective)

Total Credit Points obtained for all the courses in the Semester – II = 70

Total Credit assigned to all the papers in the Semester – II = 10

SGPA = $\frac{\text{Total Credit Points in the Semester – II}}{\text{Total Credits in the Semester – II}} = 70/10 = 7.0$

Total Credits in the Semester – II

SGPA for SEMESTER – II = 7.0

Example : M. R. S.

SEMESTER – III

Course code	Credits	% of Marks	Grade Letter	Grade Point	Credit Points = Credits x Grade Points
16070102030100	2	69	C	7	2x7=14
16070202030200	2	50	D	6	2x6=12
16070302030700	2	70	B	8	2x8=16
16070402031000	2	40	E	5	2x5=10
16070502031300	2	43	E	5	2x5=10
Total	10				62

Total Credit Points = 62

Total Credits = 10

(M. FND = Foundation, M. Hort = Core Horticulture & Forestry, M. ELT = Elective)

Total Credit Points obtained for all the courses in the Semester – III = 62

Total Credit assigned to all the papers in the Semester – III = 10

SGPA = $\frac{\text{Total Credit Points in the Semester – III}}{\text{Total Credits in the Semester – III}} = 62/10 = 6.20$

Total Credits in the Semester – III

SGPA for SEMESTER – III = 6.20

Example : M. R. S.

SEMESTER – IV

Course code	Credits	% of Marks	Grade Letter	Grade Point	Credit Points = Credits x Grade Points
16070102040100	2	58	D	6	2x6=12
16070202040200	2	50	D	6	2x6=12
16070302040700	2	70	B	8	2x8=16
16070402041000	2	55	D	6	2x6=12
16070502041300	2	78	B	8	2x8=16
Total	10				68

Total Credit Points = 68

Total Credits = 10

Total Credit Points obtained for all the courses in the Semester – IV = 68

Total Credit assigned to all the papers in the Semester – IV = 10

SGPA = $\frac{\text{Total Credit Points in the Semester – IV}}{\text{Total Credits in the Semester – IV}} = 68/10 = 6.80$

Total Credits in the Semester – IV

SGPA for SEMESTER – II = 6.80

6.5 Cumulative Grade Point Average (CGPA)

CGPA refers to the Cumulative Grade Point Average weighted across all the semesters (Four Semesters). CGPA is obtained by dividing the total number of Credit Points (CPTs) in all the semesters by the total number of credits in all the Semesters. The final result at the end of all the semesters is declared in the form of CGPA.

Note : CGPA is calculated only when the candidate passes in all the courses of all the semesters.

Example : Faculty of Rural Studies M. R. S.

Semester – I	Total Credit Points = 7.20	Total Credit = 10
Semester – II	Total Credit Points = 7.00	Total Credit = 10
Semester – III	Total Credit Points = 6.20	Total Credit = 10
Semester – IV	Total Credit Points = 6.80	Total Credit = 10

Total Credit Points Obtained From Semester – I to Semester – IV

$$\text{CGPA} = \frac{\text{Total Credit Points Obtained From Semester – I to Semester – IV}}{\text{Total Credits of Sem. – I to Sem. – IV.}}$$

In the present example : CGPA

$$72 + 70 + 62 + 68$$

$$\text{CGPA} = \frac{\quad}{\quad}$$

$$10 + 10 + 10 + 10$$

$$= \frac{272}{40} = 6.80 \quad \text{i. e. SECOND CLASS}$$

6.6 Description of Grade :

The result of the successful candidates shall be classified as follows :

1. First Division with distinction – CGPA from 8 to 10
2. First Division – CGPA from 7 to 7.99
3. Second Division – CGPA from 6 to 6.99
4. Pass Division – CGPA from 5 to 5.99

MASTER OF RURAL STUDIES
THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR
SEMESTER-I

Sr No.	Course Code	Course Category	C	IM	EM	TM	Course Title
1	16070102010100	Foundation-1	2	30	70	100	Rural Technology
2	16070202010200 16070202010300 16070202010400 16070202010500 16070202010600	Core-1	2 2 2 2 2	30 30 30 30 30	70 70 70 70 70	100 100 100 100 100	1.Agronomy-1 2. Horticulture & Forestry -1 3.Animal Husbandry-1 4.Rural Extension-1 5. Rural Economics-1
3	16070302010700 16070302010800 16070302010900	Elective-1	2 2 2	30 30 30	70 70 70	100 100 100	1. Water Resource Management 2. Pomology 3. Philosophy and Contents of Extension
4	16070402011000 16070402011100 16070402011200	Elective-2	2 2 2	30 30 30	70 70 70	100 100 100	1.Concept of social reconstruction 2.Rural development in India 3.Olericulture
5	16070502011300 16070502011400 16070502011500	Elective-3	2 2 2	30 30 30	70 70 70	100 100 100	1. Natural Recourses and Management 2.Sociology of Tribal Society 3.Reproduction in Farm Animals

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.	I	Foundation-1	16070102010100	Rural Technology	2	30	50	20	2.5 Hrs

Title: Rural Technology

Objectives:-

1. Student aware with knowledge of resources in rural area
2. Student aware with voluntary organization so can use in his area development program

Course: **100%**

Unit 1 Energy resources 30%

- 1.1 Energy Crisis
- 1.2 Conventional and non-conventional sources of energy.
- 1.3 Non conventional: Bio-Gas energy, Solar Energy, Wind Energy, Waves and tides, their development and utilization.
- 1.4 Energy saving in kitchen.

Unit 2 Farm implements (in brief) 20%

- 2.1. Spray pump
- 2.2. Harrow
- 2.3. Plough
- 2.4. Loan mover
- 2.5. Dibbler
- 2.6. Spade
- 2.7. Potato digger
- 2.8. Rotavator etc.

Unit 3 Green House technology 15%

- 3.1 Importance, Scope &Types,
- 3.2 Cultivation in green house: a. Rose b. Carnation c. Lilies d. Chrysanthemum
e. Gerbera

Unit 4 Use of Plastic in Horticultural Crop	20%
4.1 Plastic Bag in nursery.	
4.2 Mulching	
4.3 Pipe Line	
4.5 Drip and Sprinkle irrigation.	
4.6 Packing and Storage in fruit and flower.	
4.7 Plastic House / Green House.	

Unit 5 Nursery in Rural Area	15%
5.1 Fruit	
5.2 Flower	
5.3 Forest Tree	
Selection of place, land preparation, aftercare, Marketing	

References

- (1) “ Fal ane Ful ” (Gujrati edition- march 2015)
pub.: Directore of extension education, 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

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.	I	Core-1	16070202010200	Agronomy-1	2	30	50	20	2.5 Hrs

Title: Research Design in Agriculture

Objectives:-

1. Students should know about the selection of site for experiments and uniformity trials
2. To aware the students about principles of experimental design
3. Students should be aware about the simple design of experiments
4. Students should know the methods and preparation of questionnaire.
5. The student should aware about to collect the sample, methods of sampling from the field and its analysis.

Theory:-

Unit:-1 Questionnaire: - 15%

- 1.1 Definition and meaning of questionnaire
- 1.2 Characteristics of questionnaire
- 1.3 Merits of demerits of questionnaire
- 1.4 kinds of questionnaire

Unit:-2 Sampling :- 15%

- 2.1 What is sampling
- 2.2 Importance of sampling
- 2.3 Methods of sampling

Unit:-3 Some important definitions used in field experiments, design and principles of field experiments. 20%

Unit:-4 Field experimental design: - 40%

- 1.1 Aims and classification of experimental design and uniformity trials
- 1.2 Simple designs of experiments
 - 1.2.1 Paired design of experiment
 - 1.2.2 Completely Randomized Design
 - 1.2.2 Randomized Block Design
 - 1.2.3 Latin Square Design

Unit:-5 Care to be taken during field experiments 10%

References:-

1. “*Kshetra Prayog ni Karya Paddhati*” (Gujarati Edition)
- Dr. Ambalal Sendhabhai Patel & Shri Mahesh Ramnikbhai
Vaishnav
2. Agricultural Statistics in India
- P.C.Bansil
3. Field Experimental Deisng.
- Chandel R.S.
4. “*Samajik Sansodhan Paddhatio*” (Gujarati Edition)
- A.G. shah & J.K. Dave

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.	I	Core-1	16070202010300	Horticulture & Forestry	2	30	50	20	2.5 Hrs

Title: Fruit production

Objectives:

- (1) Student gets knowledge about recent production technology in fruits.
- (2) To know the principal of fruit production so useful in progressive farming.
- (3) Create self - employment source.

Theory: -

(100%)

Unit: 1 Definition, importance, scope, and problems of fruits (10 %)

Unit: 2 Planting (20 %)

- Care at the time of plantings
- Land preparation at the time planting
- Sowing distance

Unit: 3 Varietal characteristic of fruits (20%)

Unit: 4 After care in fruit crops (25 %)

- Training and pruning in fruit
- Fertilizer requirement
- Weed and weed management
- Treatment of “Bahar”

Unit: 5 Integrated pest management in fruit crops. (25%)

References

- (1) “ Fal ane Ful ” (Gujrati edition- march 2015)
pub.: Directore of extension education, 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

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.	I	Core-1	16070202010400	Animal Husbandry-1	2	30	50	20	2.5 Hrs

Title: Animal Genetics & Breeding

Objectives:

- (1) To understand the underlying truth of heritability and its application.
- (2) To know the importance of breeding for improvement of animals.
- (3) To get familiar with selection methods and to apply in practice.
- (4) To understand the importance of reproduction in profitability of animal husbandry.
- (5) To know various reproductive problem and how to overcome form them.
- (6) To know how one could help to villagers for improvement of their animals.

Unit-1: **20%**

- 1.Laws of Heritability: Mendel's experiment on peas and laws.
- 2.Selection: A tool to a breeder for improvement

Unit-2: **20%**

- 1.Variation and Traits: Sources, effects and Implications of variation
- 2.Choosing a trait for selection: affecting factors, degree of relationship

Unit-3 **20%**

- 1.Methods of Breeding and Their merits & demerits
- 2.Animal Selection: Methods, Their merits and demerits

Unit-4 **20%**

- 1.Fertility affecting breeding efficiency and measures to promote breeding efficiency
- 2.Selection criteria for breeding bulls at puberty and at adulthood

Unit-5 **20%**

- 1.Heat Detection and Maintenance of Reproductive Cycle in summer.
- 2.Pregnancy Diagnosis: Importance and Methods.

Reference Books:

1. Pashumadarog and Prasutivigyan Part - 1, 2, 3
- S. B. Kodagali, B. K. Bhavsar
2. Pashu Samvardhan - R. K. Shukal
3. A Text Book of Animal Husbandry - G. C. Banerjee.
4. Animal Genetics and Breeding - BAIF

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.	I	Core-1	16070202010500	Rural Extension-1	2	30	50	20	2.5 Hrs

Title: ગ્રામ વિકાસનો ઈતિહાસ

હેતુઓ:-

- (૧) વ્યક્તિગત અને સમુહને લોકોને મદદ કરવા તૈયાર કરવા.
- (૨) સરકારી યોજના અને કાર્યક્રમો વિશે વિદ્યાર્થી જાગ્રત કરવા.
- (૩) ગ્રામ વિકાસના બધાજ પરિબલો માટે વિદ્યાર્થીને જાગ્રત કરવા.
- (૪) સ્વૈચ્છીક સંસ્થાઓ માટે વિદ્યાર્થીને જાગ્રત કરવા.

અભ્યાસક્રમ

- એકમ :- ૧** ગ્રામ વિકાસનો ખ્યાલ ગ્રામ વિકાસના કાર્યો ગ્રામ વિકાસનો ઈતિહાસ, અને ગ્રામ વિકાસના હેતુઓ. ૨૦ %
- એકમ :- ૨** ગ્રામ વિકાસની સંસ્થાઓ (એજન્સીઓ) ૨૦ %
૧. D.R.D.A.
 ૨. સહકારી સંસ્થાઓ.
 ૩. ટ્રાયસેમ.
 ૪. આદિવાસી યોજનાઓ.
- એકમ :- ૩** વ્યક્તિગત અને સામૂહાયિક વિકાસ માટેની યોજનાઓ. ૨૦ %
૧. SGSY
 ૨. નારેગા.
 ૩. વોટરશેડ.
 ૪. ગોકુળ ગ્રામ યોજના.
- એકમ :- ૪** ગ્રામ વિકાસમાં NGO નો ફાળો, કાર્યો, વિભાવના તથા તેનું કાર્યક્ષેત્ર. ૨૦ %
- એકમ :- ૫** ગ્રામ વિકાસમાં સહકારીક્ષેત્ર જેમાં યુવાનો, મહિલાઓ અને ખેડૂતોનો રોલ તથા સરકારી બેંકોની કામગીરી. ૨૦ %

સદર્ભ ગ્રંથો:-

૧. ભારતની સામાજિક સંસ્થાઓ - પ્રો શાહ / જોષી
૨. ગ્રામ વિકાસ - લે. બાબુભાઈ અવરાણી.
૩. ભારત ગરીબી - લે. રોહિત શુક્લા.
૪. કૃષિ અર્થશાસ્ત્ર - સીદત / વ્યવહાર.

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.	I	Core-1	16070202010600	Rural Economics-1	2	30	50	20	2.5 Hrs

Title: Agriculture Economics.

Objectives:

1. To know Basic Issue Of Agriculture Economics.
2. To Know About Cropping pattern.
3. To Know About Agri. Credit Structure
4. To Familiarise Student With Policy issue That are relevant to Indian agri. Ecomics & enable then to analyze the issue.

UNIT-1 The place of agriculture in the national economy 20%
Agriculture growth since independence
agri. productivity, causes of low Productivity, measures.

UNIT-2. land use and cropping pattern in India since.1951 factors affecting cropping pattern.20%

UNIT-3 Agriculture inputs, progress & limitations - irrigation, fertilizers and manures, seeds, soil conservation and reclamation. animal husbandry and dairy development. 20%

UNIT-4. size of farms and productive efficiency - the meaning of Economic holding, size pattern of operational holding, farm size, productivity/profitability & farm efficiency. The problem of sub division and fragmentation of holding - causes and remedies 20%

UNIT-5.sources of credit for Indian farmers – institutional and non-institutional credit, importance of institutional credit, co-operative finance- structure, achievement and limitations. 20%

References:

1. A.N.Agrawal/ Kundanlal-Agricultural problems in India,-Vikash Pub. House
2. Ruddar Datt & KPM Sundharam-Indian Economy,- S.Chand & Co. Ltd. N. Delhi
3. Sadhu & Singh- Agriculture Problems in India,- Himalaya Pub. House, Mumbai
4. L. K. Wader & C. Murphy- Agri. Marketing And Co-operation, Indian Council of Agri. Res.
5. Bilgrami SAR – An Introduction To Agri. Economics, Himalaya Pub. House, Mumbai

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.	I	Elective-1	16070302010700	Water Resource Management	2	30	50	20	2.5 Hrs

Title :- Water Resource Management

Objectives :-

1. Student should know theoretically as well as practically about water conservation.
2. Student should be aware about works done in Water Resource Management.
3. To know about the Water saving irrigation method.

Theory :

100%

Unit : 1 Introduction to water Resource Management.

25 %

- 1.1 Best development of Resource Management proper use and management of water Resource.
- 1.2 Aspect of Water Resource Management.
- 1.3 Role of various agencies in water resource management.

Unit : 2 Ground Water

25 %

- 2.1 Introduction.
- 2.2 Ground water importance and Present situation.
- 2.3 Use of Ground Water.
- 2.4 Limitation of usages of Ground Water.
- 2.5 Steps to Increase Ground Water.

Unit : 3 Watershed Management

15 %

- 3.1 Introduction.
- 3.2 Points kept in mind while selecting watershed site.
- 3.3 Type of development works under water shade treatment.
- 3.4 Terms related with watershed.
 - Self held group.
 - Use group.
 - Homogeneous group.
 - Watershed.
- 3.5 Characteristics of watershed.

Unit : 4 **Water harvesting.** 10 %

- 4.1 People's participation in watershed management.
- 4.2 Necessity of rain water harvesting.
- 4.3 Methods of rain water harvesting.
 1. Check dam.
 2. Percolation Tank.
 3. Khet Talavadi.
 4. Underground water storage.
 5. Plantation tree.
 6. Well recharge.
 7. Bore recharge.

Unit : 5 **Advance Water Application Method** 25 %

- 5.1 Function of irrigation water.
- 5.2 Sprinkler irrigation system
Classification of irrigation system
Advantages of irrigation system
Disadvantages of irrigation system
- 5.3 Drip irrigation system.
Part of Drip irrigation system.
Advantages of drip irrigation system.
Disadvantages of drip irrigation system.
- 5.4 Visit to a farm and practical.
Study of drip irrigation.
- 5.5 Collect the information related to motivation of drip irrigation system about Government policy.

References :-

1. Water resources management (Gujarati Edition) – Anil K. Popat
2. Manuals on Irrigation Agronomy – R. D. Misra and M. Ahmed
3. કુદરતી સંપત્તિ - વિકાસ અને વ્યવસ્થાપન - બાબુભાઈ અવરાણી
4. Rain water Harvesting – Arnold Racey.

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.	I	Elective-1	16070302010800	Pomology	2	30	50	20	2.5 Hrs

Title: Pomology

Objectives:

- (1) Student gets knowledge about recent production technology in fruits.
- (2) To know the principal of fruit production so useful in progressive farming.
- (3) Create self - employment source.

Theory: -

100%

Unit: 1	Defination, importance, scope, and problems of fruits	10 %
Unit: 2	Planting - Caren at the time of plantings - Land preparation at the time planting - Sowing distance	20 %
Unit: 3	Varietal characteristic of fruits	20%
Unit: 4	After care in fruit crops - Training and pruning in fruit - Fertilizer requirement - Weed and weed management - Treatment of “Bahar”	25 %
Unit: 5	Integrated pest management in fruit crops.	25%

References

- (1) “ Fal ane Ful ” (Gujrati edition- march 2015)
pub.: Directore of extension education, 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

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.	I	Elective-1	16070302010900	Philosophy and Contents of Extension	2	30	50	20	2.5 Hrs

Title: Philosophy and Contents of Extension

હેતુઓ:-

- (૧) વિદ્યાર્થીઓ વિસ્તરણ શિક્ષણની મહત્વની બાબતો વિશે જાણે.
- (૨) વિદ્યાર્થીઓ વિસ્તરણ શિક્ષણનો ઇતિહાસ અને સિધ્ધાંતોથી પરિચિત બને.
- (૩) પરદેશની વિસ્તરણ સેવાઓથી માહિતગાર બને.
- (૪) ભારતીય ગ્રામીણ સમાજને સમજે.
- (૫) સામુદાયિક વિકાસ કાર્યકરનું કર્તવ્ય જાણે.

અભ્યાસક્રમ

એકમ :- ૧	વિસ્તરણ શિક્ષણ: ૧. વિસ્તરણ શિક્ષણના તત્વો. ૨. વિસ્તરણ શિક્ષણનું મહત્વ. ૩. વિસ્તરણ શિક્ષણનું કાર્યક્ષેત્ર.	૨૦ %
એકમ :- ૨	વિસ્તરણ શિક્ષણના સિધ્ધાંતો: ૧. વિસ્તરણ શિક્ષણનો ઇતિહાસ. ૨. વિસ્તરણ શિક્ષણ પ્રક્રિયાના સોપાન. ૩. વિસ્તરણ શિક્ષણનું તત્વજ્ઞાન.	૨૦ %
એકમ :- ૩	પરદેશમાં વિસ્તરણ શિક્ષણ સેવાઓ : ૧. અમેરીકા ૨. ફિલીપાઈન્સ. ૩. જાપાન ૪. બર્મા	૨૦ %
એકમ :- ૪	ભારતીય ગ્રામીણ સમાજ ૧. ભારતય ગ્રામરચના. ૨. ગ્રામ વ્યવસ્થાના પ્રકાર. ૩. જ્ઞાતિપ્રથા. ૪. ગ્રામ સમાજના લક્ષણો.	૨૦ %
એકમ :- ૫	સામુદાયિક વિકાસ કાર્યકરનું કર્તવ્ય : ૧. ભોમિયા તરીકે ૨. કાર્યસહાયક તરીકે ૩. નિષ્ણાંત તરીકે ૪. ચિકિત્સક તરીકે.	૨૦%

સદર્ભ ગ્રંથો:-

૧. કૃષિ વિસ્તરણ શિક્ષણ - ઈશ્વરભાઈ પટેલ
૨. સામુદાયિક વિકાસ અને કૃષિ વિસ્તરણ - બાબુભાઈ અવરાણી
૩. વિસ્તરણ શિક્ષણના મુળતત્વો - પ્રો. ધીરજ ધકાન

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.	I	Elective-2	16070402011000	Concept of Social Reconstruction	2	30	50	20	2.5 Hrs

Title: Concept of Social Reconstruction

Objectives:

હેતુઓ:-

- (૧) વિદ્યાર્થીઓ સમાજનવનિર્માણ વિશેનું જ્ઞાન પ્રાપ્ત કરે.
- (૨) વિદ્યાર્થીઓ ધર્મ, તત્વજ્ઞાન અને વિજ્ઞાનની સમજ કેળવે.
- (૩) વિદ્યાર્થીઓ ફ્રેચ અને અમેરિકન ક્રાંતિથી પરીચિત થાય.
- (૪) વિદ્યાર્થીઓ કાલમાર્ક્સ, અબ્રાહમ લીકન અને માર્ટીન લ્યુથરકિંગ વિશેનું જ્ઞાન પ્રાપ્ત કરે.

અભ્યાસક્રમ

- એકમ :- ૧** સમાજનવનિર્માણ એટલે શું? તે શા માટે જરૂરી છે? સમાજનવનિર્માણનું સ્વરૂપ અને ક્ષેત્ર ૨૦ %
- એકમ :- ૨** સમાજનવનિર્માણના સહાયક પરિબલોમાં ૨૦%
૧. ધર્મ - ધર્મ એટલે શું તેના ઉદભવના કારણો.
૨. તત્વજ્ઞાન - તત્વજ્ઞાનની વ્યાખ્યા અને લક્ષણો.
૩. વિજ્ઞાન - વિજ્ઞાનની વ્યાખ્યા અને લક્ષણો.
- એકમ :- ૩** ફ્રેચ અને અમેરિકન ક્રાંતિ તેના કારણો અને તેની અસરો સમાજ પૂન: નિર્માણની એક પ્રક્રિયાના ભાગરૂપે ક્રાંતિ ૨૦ %
- એકમ :- ૪** સત્તા દ્વારા સામાજિક ક્રાંતિ માર્ટીન લ્યુથરકિંગ જુનિયર, જહોન કેલ્વીન. ૨૦ %
- એકમ :- ૫** અબ્રાહમ લીકન અને કાલમાર્ક્સની ઉપયુક્તતા અને મૂલ્યાંકન. ૨૦ %

સદર્ભ ગ્રંથો:-

૧. વિશ્વનો ઇતિહાસ - ડૉ. ધારિયા
૨. સમુળી ક્રાંતિ - કિશોરલાલ મશરૂવાલા
૩. આપણો ધર્મ - ડૉ. આ.બા.ધૃવ
૪. સંશોધન પદ્ધતિઓ - ડૉ. એ.જી. શાહ અને જે. કે દવે
૫. ધર્મોનું મિલન - ડૉ. રાધાકૃષ્ણન
૬. ભારતીય તત્વજ્ઞાન - ડૉ. સી.વી. રાવળ
૭. જગતના ધર્મો - જે.એ યાજ્ઞિક

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.	I	Elective-2	16070402011100	Rural Development in India	2	30	50	20	2.5 Hrs

Title: Rural Development in India

Objectives:

Course: **100%**

UNIT-I **20%**

- Antiquity of the term Gramin (rural)
- The meaning the term development
- Rural life in India through the ages – Ancient India, Medieval India and Modern India.
- Impact of Modern World on Indian Rural Life in early 20 Century.
- Rural life in post independent India.

Unit-II **20%**

- The ‘why’ of Rural Development in India.
- The dimensions and approaches of Rural Development.
- Indian Government Rural Development Administration and Approach.
- Plans and Schemes of Rural Development in India.

Unit-III **20%**

- Characteristics of Indian Rural Life.
- Agricultural Scenario in Independent India.
- National Agriculture Policy
- Problems of Indian Agriculture.
- Experiments in Rural Development Planning – Nelokheri experiment, Firkka experiment, Itwa Pilot Project, Gurgaon Planning, Sri Niketan experiment.

UNIT-IV **20%**

- Studies in Contemporary Models of Rural Development- Ralegaon experience, Tarun Bharat Gangh, SEWA, Chipko movement, Growth Centres, Krishi Vigyan Kendra, Gramodaya Model
- Christian Missionary experiments in tribal communities.

UNIT-V **20%**

- Rural Reconstruction – ‘Gramin Punarachana’ – Its conceptual frame-work
- Rural Reconstruction in India

References:

1. An Introduction to Agricultural Economics - Bilrami SAR
2. Agricultural Problems in India - Sadhu and Sing
3. Rural Development - Sundharam I.S.
4. Indian Agricultural Economics - Rudra A

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.	I	Elective-2	16070402011200	Olericulture	2	30	50	20	2.5 Hrs

Title: Olericulture

Objectives:

- (1) Student gets knowledge about vegetable production
- (2) To know the principal of vegetable production so useful in progressive farming.
- (3) Create self - employment source.

Theory: -

100%

Unit: 1	Defination, importance, scope, and problems of vegetable growing	20 %
Unit: 2	Importance of Hybrid variety in vegetables	20 %
Unit: 3	Seedling and seed production in vegetables	20%
Unit: 4	Weed and weed management, Integrated pest management in vegetables.	20 %
Unit: 5	- Fertilizer requirement in vegetables. - Importance of plant growth regulator in vegetables	20%

References

- (1) “ Shakhaji vigan ” (Gujrati edition) – Babubhai Avarani.
- (2) “ Shakhaji pako ni kheti ” (Gujrati edition dec. -2013)
pub.: Directore of extension education, J. A.U., – Junagadh.
- (3) “ 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.	I	Elective-3	16070502011300	Natural Resources and management	2	30	50	20	2.5 Hrs

Title: Natural Resources Management

Objectives:

1. Students identify the environment and natural resources.
2. Students will become aware about different kinds of pollution.
3. Students understand the importance of energy.
4. Students become aware about the global problem of the environment laws.

Course: **100%**

Unit: - 1 Environment and natural resources. 20%

- 1.1 Definition of environment, Environment on the earth.
- 1.2 Definition cycles which keep the environment in balance.
- 1.3 Manmade and natural environment.

Unit: - 2 Pollution 15%

- 2.1 Definition of pollution, Types, Cause and effects.
- 2.2 effect of pollution on human life.

Unit: - 3 Major Elements of natural resources (water, soil, forest, air) 15%

- 3.1 Effect of polluted elements on global environment.
- 3.2 effect of natural disaster on public life.

Unit: - 4 Energy 15%

- 4.1 Definition of energy, types.
- 4.2 Merits and demerits of renewable sources of energy.

Unit: - 5 Natural resources 35%

- 5.1 Place and importance of natural resources of India.
- 5.2 Care of natural resources
- 5.3 "Eco-Friendly" Approach for conservation and protection of natural resources
- 5.4 Nation sanctuaries and natural parks.
- 5.5 Environmental laws.

5.5.1 The air act 1981

5.5.2 The Water act 1974

5.5.3 The Environment (protection act) 1986

Reference

1. Paryavaran sath. - Ramesh Savaliya
2. Environment and seismic engineering - Dr.M.B Gohil
3. Paryavaran shastra - Bipinbhai joshi
4. Paryavaran - Dr.M.B.Gohil
5. Chalo jagiyre paryavaran bachaviye - Dr.Rameshchandra J. Bhayani.
6. Kudarat Sampati vikat andvyavasthapan - Babubhai avarani

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.	I	Elective-3	16070502011400	Sociology of Tribal Society	2	30	50	20	2.5 Hrs

Title: Sociology of Tribal Society

Objective:-

1. To study the sociology of tribal society
2. To Study the Economics classification of tribal
3. To know the problems of tribal society
4. To know about Tribal life style of Tribal Society.

Course:-

100%

Unit: - 1 Sociology of Tribal Society.

20%

- 1.1 Meaning, Concept, usefulness of Tribal Society.
- 1.2 Definition and character of schedule tribes.

Unit: - 2 Economic Classification of S.T

20%

Unit: - 3 Sociological and cultural outlines of S.T

20%

- 3.1 Forms of marriage
- 3.2 Status of women in tribal society
- 3.3 Religions beliefs and returns.
- 3.4 Dimensions of cultural.

Unit: - 4 Problems of tribes

20%

Poverty, dept, illiteracy and agriculture problems lifestyle of various

Unit: - 5 Introduction to Tribes in Gujarat

20%

-Bhil, Dubala, Sidi,

Reference:-

1. Adivasi Samajnu Samajshashtra- A G Shah and J K Dave
2. Gujaratna Adivasio_ Shah Vimal
3. Adivasiona Prashno_ Shah Vimal
4. Bhartiya Adivasi Samaj- A G Shah and J K Dave
5. Gujaratna Dubala_ P G Shah

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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.	I	Elective-3	16070502011500	Reproduction in Farm Animals	2	30	50	20	2.5 Hrs

Title: Reproduction in Farm Animals

Objectives:

- (1) To understand Fertilization and Implantation
- (2) To understand Fetal Development and Parturition to understand the basic mechanism of Reproduction.
- (3) To understand How the Reproduction is involved in animal production.
- (4) To understand estrus cycle.
- (5) To know udder and milk secretion.

Course:

Unit-1 Reproductive System	30%
- Male Reproductive System: Organs	
- Female Reproductive System: Organs	
-	
Unit- 2 Hormones related to Reproduction.	10%
Unit- 3 Mechanism of Female Reproduction	20%
- Gametogenesis: Oogenesis, Spermatogenesis	
Unit- 4 Estrus Cycle and Ovulation	10%
Unit- 5 Mammary Gland and Milk Secretion	30%
- Structure and Functioning of udder.	
- Milk Secretion: Factors and Mechanism.	

Reference Books:

1. Pashumadarog and Prasutivigyana Part - 1, 2, 3
- S. B. Kodagali, B. K. Bhavsar
2. Pashu Samvardhan - R. K. Shukal
3. A Text Book of Animal Husbandry - G. C. Banerjee.
4. Animal Genetics and Breeding - BAIF

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-II

Sr No	Course Code	Course Category	C	IM	EM	TM	Course Title
1	16070102020100	Foundation-2	2	30	70	100	Rural Development
2	16070202020200 16070202020300 16070202020400 16070202020500 16070202020600	Core-2	2 2 2 2 2	30 30 30 30 30	70 70 70 70 70	100 100 100 100 100	1. Agronomy-2 2. Horticulture & Forestry -2 3. Animal Husbandry-2 4. Rural Extension-2 5. Rural Economics-2
3	16070302020700 16070302020800 16070302020900	Elective-4	2 2 2	30 30 30	70 70 70	100 100 100	1. Poultry Production 2. Leadership in Extension Education 3. Forestry
4	16070402021000 16070402021100 16070402021200	Elective-5	2 2 2	30 30 30	70 70 70	100 100 100	1. Computer application 2. Floriculture 3. Personality Development
5	16070502021300 16070502021400 16070502021500	Elective-6	2 2 2	30 30 30	70 70 70	100 100 100	1. Study of Greats 2. English 3. Economics of Cooperation

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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.	II	Foundation-2	16070102020100	Rural Development –	2	30	50	20	2.5 Hrs

Title :- Rural Development

Objectives :-

1. The students will aware with the basic problems of rural areas.
2. To aware the Rural peoples about the govt. scheme Related to Rural area.
3. To appraise the students with Rural society.

Theory : **100%**

Unit : 1 Economics Development and Economic growth. 20 %

- Meaning and Definition and difference of Economic Development and Economic Growth.
- Indicators of Economics Development.
- Difference between Economic Growth and Economic Development.
- Determination of Requirements of Economic Growth.

Unit : 2 Economic system in Rural India 20 %

- Rural Economic and Rural satisfaction.
- Factors of change in Rural Economy.
- Characteristics of under developed Economy.

Unit : 3 Community Development Programme 20 %

- Meaning of community. Development projects.
- Objectives of community. Development projects.
- Administrative structure of community. Development projects.
- Programmers of community. Development projects.
- Impact on Rural Society.

Unit : 4 Sustainable Developments 20 %

- Sustainable Development's meaning and Defination.
- Sustainable Development's indicators.
- Sustainable Development and Growth.

Unit : 5 Government approach policies and programs for Rural Development.

20%

References :-

1. Development & Environment Economics – Dr. Mahesh Joshi.
2. Rural Sociology – Jagdish Dave.

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.	II	Core – 2	16070202020200	Agronomy -2	2	30	50	20	2.5 Hrs

Titel: Advance Agronomy

Objectives:

- 1 To Know the Advance technique in Agronomy
- 2 Create sets emrcoyment source.
- 3 To provide knowledge of progressive farming.

Unit: 1 Organic farming. 20%

- Definite & Meaning
- Principles of organic farming
- Factor affecting organdie farming.
- Merits & demerits of organdie farming.

Unit: 2 Hydroponics 20%

- Definition & Meaning
- History of Hydroponics
- Types Of Hydroponics
- Merits & demerits.

Unit: 3 Bio - fertilizer 20%

- Definition & Meaning
- Classification of bio-fertilizers
- Preparation and application of bio-fertilizer

Unit-4 Mushroom Cultivation 20%

- Introduction
- Food value of mushroom
- Cultivation practices of different types of mushroom

- Meaning & importance
- Methods of tissue culture

References:-

1. *Pragatisil Kheti* (Gujarati Edition)
-SSK, JAU- Junagadh
2. Mushroom Cultivation
J.N. Kapoor
3. Hydroponics
-Nagendra Vijay
4. Bacterial Fertilizer
- B.R. Tilak

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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.	II	Core - 2	16070202020300	Horticulture & Forestry -2	2	30	50	20	2.5 Hrs

Title: Production Technology in vegetable

Objectives:

- (1) Student gets knowledge about vegetable production
- (2) To know the principal of vegetable production so useful in progressive farming.
- (3) Create self - employment source.

Theory: -

100%

Unit: 1	Defination, importance, scope, and problems of vegetable growing	20 %
Unit: 2	Importance of Hybrid variety in vegetables	20 %
Unit: 3	Seedling and seed production in vegetables	20%
Unit: 4	Weed and weed management, Integrated pest management in vegetables.	20 %
Unit: 5	- Fertilizer requirement in vegetables. - Importance of plant growth regulator in vegetables	20%

References

- (1) “ Shakhaji vigan ” (Gujrati edition) – Babubhai Avarani.
- (2) “ Shakhaji pako ni kheti ” (Gujrati edition dec. -2013)
pub.: Directore of extension education, J. A.U., – Junagadh.
- (3) “ Shakhaji ” (Gujrati edition may-2009)
pub.: Directore of extension education, A. A. U., – Anand.

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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.	II	Core-2	16070202020400	Animal Husbandry – 2	2	30	50	20	2.5 Hrs

Title :- Animal Feeds and Nutrition

Objectives :-

1. To learn Importance of Feed's and Nutrition.
2. To understand the concentrates.
3. To understand the Animal Nutrition.

Theory :

100%

Unit : 1	Composition and classification of feed stuffs :- Roughages : Dry and Succulent.	15 %
Unit : 2	Concentrates :- Energy rich and protein rich :- Energy rich concentrates	15 %
Unit : 3	Protein rich concentrates : Plant, Animal & NPN feed stuffs.	15 %
Unit : 4	Unconventional Livestock feeds in India - Vegetable protein sources. - Animal protein sources. - Energy sources. - Miscellaneous feeds.	20 %
Unit : 5	Nutrients of feeding stuffs and animal body : water, carbohydrates, protein, Lipids and minerals. - Feed supplements and buy pass proteins.	35 %

References :-

1. પશુ આહાર - બી. એમ. પટેલ
- એન. એસ. રાઢડીયા
2. પશુ આહાર (પ્રાયોગિક) - બી. એમ. પટેલ
- એન. એસ. રાઢડીયા
3. Animal Nutrition - Maynard & Loosli
4. Animal Nutrition - A. C. Chaudhari
5. ગોઢર્શન - પશુપોષણ વિશેષાક

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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.	II	Core - 2	16070202020500	Rural Extension -2	2	30	50	20	2.5 Hrs

Title :- History of rural Development

હેતુઓ:-

- (૧) વિદ્યાર્થીઓ ગ્રામ વિકાસની યોજનાઓનો પરિચય મેળવે.
- (૨) વિદ્યાર્થીઓ વિવિધ વિસ્તરણ કાર્યકરોની ફરજો સમજે.
- (૩) વિદ્યાર્થીઓ નિદર્શન વિશે સમજ કેળવે.
- (૪) વિદ્યાર્થીઓ દ્રશ્ય - શ્રાવ્ય સાધનોનું મહત્વ સમજે

અભ્યાસક્રમ

- એકમ :- ૧** ગ્રામ વિકાસની યોજના અને વ્યુહરચના ૪૦ %
૧. આદિજાતિ વિસ્તાર અને અનુસુચિત જન જાતિના ખેડૂતો માટેની યોજના.
 ૨. જમીન સંરક્ષણ યોજનાઓ.
 ૩. કૃષિ યાંત્રીકરણ
 ૪. જમીનની જાળવણી અને ખાતરો.
- એકમ :- ૨** ગ્રામ સેવક, વિસ્તર અધિકારી અને તાલુકા વિકાસ અધિકારીની ફરજો. ૨૦ %
- એકમ :- ૩** નિર્દેશન એટલે શું ? નિર્દેશનના પ્રકારો જાણાવી ૨૦ %
૧. પદ્ધતિ નિર્દેશન.
 ૨. પરીણામ નિર્દેશન વિશે વિગતે સમજાવો.
- એકમ :- ૪** દ્રશ્ય - શ્રાવ્ય સાધનોનું વ્યવહારિક અને મનોવૈજ્ઞાનિક મહત્વ જણાવો. ૧૦ %
- એકમ :- ૫** વિસ્તરણ શિક્ષણ પદ્ધતિઓની અસરકારકતા. ૧૦ %

સદર્ભ ગ્રંથો:-

૧. કૃષિ વિસ્તરણ શિક્ષણ - ઈશ્વરભાઈ પટેલ
૨. વિસ્તરણ શિક્ષણના મુળતત્વો - પ્રો. ધીરજ ધકાન
૩. કૃષિ યાંત્રીકરણની માર્ગદર્શિકા - ખેતી નિયામકની કચેરી કૃષિ ભવન, ગાંધીનગર
૪. કૃષિ સહાય યોજના - ખેતી નિયામકની કચેરી, કૃષિભવન, ગાંધીનગર.

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.	II	Core-2	16070202020600	Rural Economics -2	2	30	50	20	2.5 Hrs

Title :- Banking & Rural Finance

Objectives :-

1. To become aware about banking system.
2. To understand importance of credit in Rural Area.
3. To think about how to get easy finance in the Rural Area.

Theory :

100%

- Unit : 1** Importance of Credit in Agriculture, classification of Agricultural Finance.
Principles of sound Agricultural Credit. 20 %
- Unit : 2** Commercial Bank – Functions, Credit creation – Achievement and problems
In Rural Finance.
Regional Rural Banks (RRBS) – Progress & limitations. 20 %
- Unit : 3** Co-operative credit structure in India.
Short term structure – objectives, functions & limitations.
Long term structure – objectives, functions & limitations. 20%
- Unit : 4** NABARD – objectives, functions & limitations
Concept of micro finance and its relevance for Rural Development. 20%
- Unit : 5** Central Bank – Meaning & Functions
Instrument of credit creation. 20%

References :-

1. Mitos – Money and Banking.
2. C. M. Chaudhari – Banking & Finance.
3. Dingra I. C. – Rural Banking.
4. S. B. Gupta – Monetary Planning in India.
5. S. S. Tarapur – Indian Financial Policy.
6. L. K. Wader & C Murphy – Agri. Marketing and Co. Op. - Indian Council of Agri. Research.
7. Rudder Datt & KPM Sundharam – Indian Economy – G. Chand & Company Ltd. Delhi.

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.	II	Elective - 4	16070302020700	Poultry Production	2	30	50	20	2.5 Hrs

Title: - Poultry Production

Objective:-

1. To understand the importance of management skills for poultry industries.
2. To Learn about care and management of layer birds and broiler birds.
3. To understand how to make poultry business profitable.
4. To understand the importance of disease control in birds.

Course:

Unit: 1 Terminology related to poultry 20%
Poultry rearing
Different methods, merits-demerits

Unit: 2 Incubation, hatching and brooding 20%
Types of Hatching, care during hatching
Brooding of chicks and types of brooders

Unit 3 Principles of Light requirement and management of birds 30%
Methods of application,
Care and management of Layer birds and Broiler birds

Unit 4 Eggs: 15%
The structure and nutritive value of eggs
Egg marketing, and wrong beliefs about eggs

Unit 5 Poultry Development Projects 15%
Different government schemes to establish different poultry businesses
Institutions engaged in poultry business of the state

Reference:-

1. A text book of animal husbandry -by G.C Banerjee
2. A text book of animal husbandry – ICAR
3. Margha Palan NT Maheta and Ghasura, University Granth Nirman Board- Gandhinagar

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.	II	Elective - 4	160703020800	Leadership in extension Education	2	30	50	20	2.5 Hrs

Title: - Leadership in extension Education

Objective

1. Students know about the different types of leaders.
2. Students know about the different methods of leaders working with the people.
3. Students will get information regarding function of leader.
4. Students become aware about the benefits of using local leaders in extension activities.

Course:-

Unit: - 1 Meaning leaders, Leadership 20%

- Types of leadership
- Style of leadership
- 1.1 Authoritative
- 1.2 Democratic.
- 1.3 laissez faire leadership

Unit; - 2 Method of leader's working 20%

- 2.1 Use of authority
- 2.2 Paternalism.
- 2.3 To help each other.

Unit; - 3 Principles of group dynamics 20%

Unit; - 4 Function of leader 20%

Unit; - 5 Leaders 20%

- 5.1 Advantage of using local leader
- 5.2 points to be keep in mind of while work by local leader.
- 5.3 Use of leader in extension activity.
- 5.4 Recognition of leader services.
- 5.5 Qualities of leader, Selection and training.
- 5.6 Training camp for rural leaders.

Reference:-

1. Krish vistran sikshan - Ishwarbhai patel
2. Vistran sikshan na multalv - Pro.Dhiraj Dhakan.

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.	II	Elective - 4	16070302020900	Forestry	2	30	50	20	2.5 Hrs

Title :- Forestry

Objective

- (1) Student gets knowledge about forest
- (2) To aware with laws of forest and wild life animal
- (3) To aware with social forestry and help in forest conservation.

Theory: -

100%

Unit: 1 Social forestry

10 %

1. Importance
2. Scheme
3. Conservation of forest

Unit: 2 Apiculture (Honey bee keeping)

20 %

1. Importance
2. Types of bee
3. Structure of comb
4. Method of honey bee rearing
5. Centers of bee rearing

Unit: 3 Wild life century and national park in Gujarat state

20%

- Introductory information about wild life animals like; lion, tiger, monkey, deer, leopard, peacock, snake, birds.

Unit: 4 Medals awards of forest department

- the environment protection act
- forest conservation act
- the wildlife protection act

20 %

Unit: 5 Forest trees and its medicinal use:

30%

1. Satavari
2. Arduci (*Adhatoda vasaca*)
3. Nagod
4. Brahmi (*Centella asiatica*)
5. Kaucha (*Mucuna prurita*)

6. Arjun (*Terminalia anjuna*)
7. Harde (*Terminalia chebula*)
8. Karanj (*Pongamia pinnata*)
9. Amla
10. Garmalo
11. Galo
12. Jethimadh
13. Mahudo
14. Neem (*Azardica indica*)

References

1. Forests in india - Agrawal V.P (1985) - Pub: oxford & IBH publishing Co. pvt. Ltd,
new delhi
2. Forestry in india - Dwivedi A. P (1980) - Pub: jugalkishor& co., dehradun
3. A textbook of silviculture - Dwivedi A.P (1980) - Pub IBD, Dehradun

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.	II	Elective - 5	16070402021000	Computer Application	2	30	50	20	2.5 Hrs

Title :- Computer Application

Objectives :-

Unit: 1 Computer Fundamental 25%

- Introduction, History, Characteristics, Functions
- Basic Structure, Generations, Types, Hardware
- Software, Input-Output-Storage Device

Unit: 2 What is Virus? 15%

- Introduction
- How it harms the computer
- Virus Solutions

Unit: 3 MS Office 25%

- MS-world,
- MS-excel,
- MS-PowerPoint

Unit: 4 Internet 25%

- Introduction, -
- Use of internet
- E-mail, - merits and limitation
- net -banking

Unit: 5 Uses of Computer in Everyday Life 10%

Reference Books

1. Basic Computer Application
 - H. B. Bhadka, Dr. N. N. Jani, Dr. G. R. Kulkarni
2. Computer Parichay - Computer Jagat
3. Computer Fundamentals

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.	II	Elective - 5	16070402021100	Floriculture	2	30	50	20	2.5 Hrs

Title :- Floriculture

Objectives:-

Design a course with objectives of
Student gets theoretical as well as practical knowledge of Flower cultivation practices so useful in progressive farming
Create self - employment source.

Course

Unit - 1 Floriculture	20%
1.1 Definition	
1.2 Importance	
1.3 Salient future	
Unit - 2 introductory information about Flowers	20%
2.1 Annual (Seasonal)	
2.2 Biannual	
Unit - 3 Cultivation practices of major flowers of Gujarat state .	20%
3.1 Rose	
3.2 Marigold	
3.3 Chrysanthemum	
3.4 Aster and others.	
Unit - 4 Greenhouse technology for flower crops.	20%
Unit - 5 Government scheme to motivate flower cultivation & production	20%

Reference:-

1. Floriculture in India
-Randhawa G.S and Mukhopadhyay A. (1986) pub Allied publishers private ltd, newdelhi, india.
2. Advances in horticulture vol. 12
-edited by chadhu, K.L and Bhattacharya
-Malhotra publishing house New delhi
3. Beautiful gardens
-Randhawa M.S
-I.C.A.R, New Delhi
4. Creating small gardens
-roy strong
-conran octopus ltd, London

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.	II	Elective - 5	16070402021200	Personality Development	2	30	50	20	2.5 Hrs

Title :- Personality Development

Objective:-

- 1.To acquire ability of self development and
- 2.To develop a protection personality and bring the dreams to a truth.
- 3.To develop understand about one self as a center self of the globe.
- 4.To develop self confidence in own work and play an importance role.

Course:-

Unit: - 1 Personality development (P.D)- 20%

- 1.1 Definition, internal qualities,
- 1.2 Characteristic of P.D-
- 1.3 To bring importance among human correspondence.
- 1.4 Internal at steps for efficient personality.

Unit: - 2 Influence of self development. 20%

- 2.1 Identification of own goals
- 2.2 suggestions for self development
- 2.3 keys for self development
- 2.4 knowledge requirement for P.D
- 2.5 Three importance dimensions of P.D
- 2.6 Slogans for successful life.

Unit: - 3 Positive self image 20%

- 3.1 Types hurdles & evaluations, of self image.
- 3.2 Factors affects of self image.
- 3.3 positive effects of self image

Unit 4	Self affections & self impression	20%
4.1	characteristics of excessive self affection	
4.2	Factors of self realization.	
Unit 5	Frame of reference.	20%
5.1	Possibility of values of life and its concept	
5.2	concept of "myself as a complete personality"	
5.3	Fundamental thought & values of modern management.	
5.4	Ten styles of management.	

Reference:-

1. Personality development kevi rite? - Raju Andharia
2. Safalata kem melvaso?
3. Mahiti personlity
4. Mahiti samajma Management samasya ahe padakaro - Dhaval Maheta.

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.	II	Elective - 6	16070502021300	Gujrati	2	30	50	20	2.5 Hrs

Title :- Gujrati

કૃતિઓ:-

- (૧) 'જય સોમનાથ' - કનૈયાલાલ મુનશી.
- (૨) 'ધૂમકેતુની' શ્રેષ્ઠ વાર્તાઓ - ગૌરી શંકર જોશી.

હેતુઓ:-

- (૧) વિદ્યાર્થીઓ નવલકથા સાહિત્યસ્વરૂપનો આસ્વાદ માણે.
- (૨) વિદ્યાર્થીઓ નવલીકાઓનો આસ્વાદ માણે.
- (૩) વિદ્યાર્થીઓની કલ્પના શક્તિ વિસ્તરે
- (૪) વિદ્યાર્થીઓમાં નીતિમતા, પ્રમાણિકતા, લાગણી, સંવેદનશીલતા જેવા માનવીય ગુણો વિકસે.

અભ્યાસક્રમ

- એકમ :-** ૧ નવલકથા સાહિત્ય સ્વરૂપનો ઉદ્ભવ વિકાસ ૧૦ %
- એકમ :-** ૨ કનૈયાલાલ માણેક મુનશીના જીવન - કવનનો પરિચય ૧૦ %
- એકમ :-** ૩ 'જય સોમનાથ' નવલકથાનું સમગ્ર લક્ષી મૂલ્યાંકન, કથાવસ્તુ, પાત્રાલેખન, સંવાદકળા, વાર્તાવર, વર્ણનકળા નવલકથાનો આરંભ - અંત, શીર્ષક વગેરેના સંદર્ભ ૩૦ %
- એકમ :-** ૪ નવલકથા (ટુંકીવાર્તા)નો ઉદભવવિકાસ અને સર્જક ગૌરીશંકર જોશીનું - જીવન - કવન ૧૫ %
- એકમ :-** ૫ ધૂમકેતુની શ્રેષ્ઠવાર્તાઓનું સમગ્ર લક્ષી મૂલ્યાંકન. ૩૫ %
- ૧ થી ૨૨ - વાર્તાઓ - દરેક વાર્તાનું સ્વતંત્ર રસદર્શન પાત્રના સંદર્ભમાં - સંદર્ભ સમજૂતિ વગેરેને ધ્યાનમાં રાખી મૂલ્યાંકન

સદર્ભ ગ્રંથો:-

૧. ગ્રંથ અને ગ્રંથકાર શ્રેણી - ગુજરાત સાહિત્ય પરિષદ
૨. ગુજરાતી સાહિત્ય ભાગ - ૧ થી ૪ - સં ઉમાશંકર જોશી
૩. ગુજરાતી સાહિત્યનો ઇતિહાસ - રમણલાલ ચી. શાહ
૪. ગુજરાતી સાહિત્યની રૂપરેખા ભાગ ૧ - ૨ - વિજયરાય ક. વૈધ
૫. ગુજરાતી સાહિત્યની વિકાસ રેખા - ધીરુભાઈ ઠાકર
૬. નવલકાથા: શિલ્પ અને સર્જક - ડૉ. નરેશવેદ, પ્રકાશક પ્રવિણ પુસ્તક ભંડાર, રાજકોટ પ્ર.આ. ૧૯૮૩
૭. નવલકથા સ્વરૂપ - પ્રવીણ દરજી યુનિ. ગ્રંથનિર્માણ બોર્ડ અમદાવાદ - પ્ર આ. ૧૯૮૬
૮. ટુંકીવાર્તા - વિજયશાસ્ત્રી, ચંદ્રમૌલી પ્રકાશન અમદાવાદ - પ્ર આ ૧૯૮૪
૯. ' જય સોમનાથ ' - કમા મુનશી
૧૦. ' ધૂમકેતુની શ્રેષ્ઠ વાર્તાઓ ' - ગૌરી શંકર જોશી

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.	II	Elective - 6	16070502021400	English	2	30	50	20	2.5 Hrs

Subject:- English

Objectives:

1. To strengthen the vocabulary of students.
2. To strengthen the grammar capacity, ability of the students.
3. To introduce the students to English Literature.
4. To generate interest of the students for English Literature.
5. To generate the structural capacity of students for grammar.

Course		100%
Unit – 1	Text – Tales from Tagore - edited by E.F. Dodd	20 %
Unit – 2	Parts of Speech and Articles	20 %
Unit – 3	Tenses and Modal Auxiliaries Verbs	30 %
Unit – 4	Prefix Suffix and Word Building	15 %
Unit – 5	Application writing	15 %

Reference Books

- Wren and Martin English Grammar
- Essentials of English Grammar
- Communication Skills Basic Theories by – Ms. Krupa Purohit, Dr. I.G. Purohit

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.	II	Elective - 6	16070502021500	Economics	2	30	50	20	2.5 Hrs

Title: Economics of Cooperation

Objectives:

- 1.To understand the philosophy and principles of coop.
- 2.To know the values of coop. and realize it
- 3.To understand the importance of cooperatives in agri. and rural development
- 4.To get introduction of different cooperative societies

Course:

Unit – 1 Origin, Meaning and definition co-operation, Principles, values and characteristics of co-operation, Role of Co-operatives in agri. and rural development. 20%

Unit – 2 Comparison of Cooperation with other economic system like Capitalism, socialism, communism and mixed economy. 20%

Unit – 3 Nature, importance, objectives, function and limitation of
– PACS, District central coop. banks, state coop. banks. Processing co – Operative
Marketing co – Operative 30%

Unit – 4 Roll of the state in development of co – Operative sector, government controls and its effects on co – Operative activity 15%

Unit – 5 Evaluation of Indian co-operative movement.
Successes and limitations 15%

Reference Books

1. Theory, history and practice of co-operative.
Bedi .R.D
2. Co-operative movement in India
Hough E.M.
3. Rural Development co-operation.
Mathur B.L
4. What is co-operation?
War buss

5. The law and principles of co-operation.
Haverl. Calvert
6. Factors Affecting liabilities
Rao S.B
7. Co-operative in agriculture.
8. Co-operative and rural development.
Kanitha

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-III

Sr No .	Course Code	Course Category	C	IM	EM	TM	Course Title
1	16070102030100	Foundation-3	2	30	70	100	Scientific and Technical Writing
2	16070202030200	Core-3	2	30	70	100	1. Agronomy-3
	16070202030300		2	30	70	100	2. Horticulture & Forestry -3
	16070202030400		2	30	70	100	3. Animal Husbandry-3
	16070202030500		2	30	70	100	4. Rural Extension-3
	16070202030600		2	30	70	100	5. Rural Economics-3
3	16070302030700	Elective-7	2	30	70	100	1. Environmental Economics
	16070302030800		2	30	70	100	2. Crop Disease and Weed Control
	16070302030900		2	30	70	100	3. Rural Extension
4	16070402031000	Elective-8	2	30	70	100	1. Principals of Social Reconstruction
	16070402031100		2	30	70	100	2. Disaster Management
	16070402031200		2	30	70	100	3. Social Engineering
5	16070502031300	Elective-9	2	30	70	100	1. Research Methodology
	16070502031400		2	30	70	100	2. Rural Marketing Management
	16070502031500		2	30	70	100	3. N.G.O. Management

Faculty of Rural Studies

Name of Course	Sem ester	Core/ Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Practical/ viva marks	External exam time duration
M.R.S.	III	Foundation-3	16070102030100	Scientific and Technical Writing	2	30	70	--	2.5 Hrs

Title: - Scientific and Technical Writing

Objective:

- (1) To study and use the scientific and technical methods of writing.
- (2) To study methods of thesis writing and reference citation.
- (3) To understand different experimental designs and their uses.
- (4) To know how to write a research proposal and research paper.

Theory: **100%**

Unit: 1 Dissertation and thesis:

Introduction and Detail methodology of thesis writing 20%

Unit: 2 Reference citations:

Introduction and methods of reference writing 20%

Unit: 3 Research proposals: its importance and method, points to be considered before implementation of projects 20%

Unit: 4 What is Research and what is Discovery?

Types of research and types of discoveries with examples 20%

Unit: 5 Research paper and Proof reading marks

Detail methodology of research paper writing and different proof reading marks and their uses 20%

Reference Books:-

1. A text book of animal husbandry - G. C. Banerjee
2. Animal genetics and breeding - BAIF
3. Animal management: introduction animal science - James J. Kiser
4. Dairying in India a review - D.N. Kharady
5. "Kshetra Prayog Ni Karya Paddhati"
Dr. Ambalal Sendhabhai Patel & Shri Mahesh Ramaniklal Vaishnav
6. Agriculture Statistics in India -P.C.Bansil
7. Field Experimental Design -Chandel R.S.

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.	III	Core- 3	16070202030200	Agronomy-3	2	30	70	--	2.5 Hrs

Titel: Techniques For Higher Crop Production

Objectives:-

100%

1. Students will become aware with advance technology in agriculture
2. Students get knowledge which useful in progressive farming
3. To create self employment

Unit-1 Soil conservation:

20%

- Introduction
- Types of soil conservation
- Problems & Remedies

Unit-2 Soil fertility:

20%

- Introduction
- Factors affecting soil fertility
- Management of soil fertility

Unit-3 Soil reclamation:

20%

- Introduction
- Types of problematic soils
- Types and characteristics of saline soil
- Reclamation of saline soil

Unit-4 Tillage :

20%

- Introduction
- Objectives of tillage
- Types of tillage
- Merits & Demerits of tillage

Unit-5 Micro irrigation

20%

- Concept of sprinkler irrigation
- Concept of drip irrigation

References:

1. *Jamin Vigyan ane vyavastha* (Gujarati Edition)
-Babubhai Avarani
2. *Jamin Vigyan ane pak utpadan* (Gujarati Edition)
-Dr. A.S. Patel & Dr. R. S. Joshi
3. Water resource management
- Anil K. Popat
4. Manures and Fertilizer
- R. S. Yawalkar, J.P. Agrawal and S. Bokde

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.	III	Core- 3	16070202030300	Horticulture & Forestry	2	30	70	--	2.5 Hrs

Title: Applied Forestry

Objectives:

- (1) Student gets knowledge about forest
- (2) To aware with laws of forest and wild life animal
- (3) To aware with social forestry and help in forest conservation.

Theory: -

100%

Unit: 1 Social forestry

10 %

1. Importance
2. Scheme
3. Conservation of forest

Unit: 2 Apiculture (Honey bee keeping)

20 %

1. Importance
2. Types of bee
3. Structure of comb
4. Method of honey bee rearing
5. Centers of bee rearing

Unit: 3 Wild life century and national park in Gujarat state

- Introductory information about wild life animals like; lion, tiger, monkey, deer, leopard, peacock, snake, birds.

20%

Unit: 4 Medals awards of forest department

- The Environment protection act.
- The wildlife protection act.
- Forest conservation act

20 %

Unit: 5 Forest trees and its medicinal use:

30%

1. Satavari
2. Arduci (*Adhatoda vasaca*)
3. Nagod
4. Brahmi (*Centella asiatica*)
5. Kaucha (*Mucuna pruita*)
6. Arjun (*Terminalia anjuna*)

7. Harde (*Terminalia chebula*)
8. Karanj (*Pongamia pinnata*)
9. Amla
10. Garmalo
11. Galo
12. Jethimadh
13. Mahudo
14. Neem (*Azardica indica*)

References

1. Forests in india - Agrawal V.P (1985) - Pub: oxford & IBH publishing Co. pvt. Ltd,
new delhi
2. Forestry in india - Dwivedi A. P (1980) - Pub: jugalkishor& co., dehradun
3. A textbook of silviculture - Dwivedi A.P (1980) - Pub IBD, Dehradun

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.	III	Core- 3	16070202030400	Animal Husbandry-3	2	30	70	--	2.5 Hrs

Title :- Dairy Industry

Objectives :-

1. To understand the importance of dairy industry.
2. To know various dairy industry problems and how to overcome from them.
3. To know how one could help to villagers for preservation of milk and milk products.

Theory : **100%**

Unit : 1 - Importance of Dairy Industry.
- Milk Production in the world : An overview. 20 %

Unit : 2 - Milk consumption & availability per capita.
- Milk types and their specifications. 20 %

Unit : 3 - Sources of Contamination of Milk and control measures.
- Milk testing : society level & dairy level. 20 %

Unit : 4 - Storage of Milk : methods and advantages : Heating.
- Chilling & by adding preservatives. 20 %

Unit : 5 - Diseases transmitted through milk and their preventive measures.
- Adulteration in milk and its test : Adulterants used and their testing methods. 20 %

References :-

1. Dairy Vigyan - C. H. Joshi
2. Dudh and Dudhni Banavato (Gujarati) - B. M. Patel
3. Text Book of Dairy Science - Henny, Judkin
4. Dairying in India – Areview - D. N. Kharady
5. Dairy Microbiology - K. C. Mahanta

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.	III	Core- 3	16070202030500	Rural Extension-3	2	30	70	--	2.5 Hrs

Title: Rural Extension

હેતુઓ:-

- (૧) વિદ્યાર્થીઓ સામુદાયિક વિકાસ યોજનાના ઉદ્દેશોથી પરિચિત બને.
- (૨) વિદ્યાર્થીઓ સામુદાયિક વિકાસ યોજનાના કાર્યક્રમોથી માહિતગાર બને.
- (૩) વિદ્યાર્થીઓ સામુદાયિક વિકાસ યોજનાનું વહિવટી માળખું સમજે.
- (૪) વિદ્યાર્થીઓ ગ્રામ અર્થ વ્યવસ્થામાં પરિવર્તન લાવતો પરિબળો વિશે જાણો.

અભ્યાસક્રમ

એકમ :- ૧	સામુદાયિક વિકાસ યોજનાનો અર્થ સામુદાયિક વિકાસ યોજનાના હેતુઓ (ઉદ્દેશો)	૨૦ %
એકમ :- ૨	સામુદાયિક વિકાસ યોજનાના કાર્યક્રમો સામુદાયિક વિકાસ યોજનાની ગ્રામીણ સમાજ પર અસર	૨૦ %
એકમ :- ૩	સામુદાયિક વિકાસ યોજનાનું વહિવટી માળખું	૨૦ %
એકમ :- ૪	ગ્રામીણ અર્થવ્યવસ્થામાં પરિવર્તન લાવતાં પરિબળો	૨૦ %
એકમ :- ૫	ગ્રામીણ અર્થવ્યવસ્થા પર બ્રિટિસ અમલની અસર	૨૦ %

સદર્ભ ગ્રંથો:-

૧. ગ્રામીણ સમાજશાસ્ત્ર - એ. જી. શાહ
૨. કૃષિ વિસ્તરણ શિક્ષણ - ઈશ્વરભાઈ પટેલ
૩. વિસ્તરણ શિક્ષણના મુળતત્વો - પ્રો. ધીરજ ધકાણ

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.	III	Core- 3	16070202030600	Rural Economics-3	2	30	70	--	2.5 Hrs

Title :- Rural Economic Development

Objectives :-

1. To aware about importance of rural Economy.
2. To get informed about – rural Economic problems.
3. To think about the remedial measures of rural Economic Development.

Theory : **100%**

Unit : 1 Meaning and salient features of Rural Economy.
Significance of Rural Development. 15 %

Unit : 2 Negative factors and rural Development.
Drought, Flood & Famine and Rural Development, Drought & Famine Causes, effecton Rural Development. Remedial Measures to solve the Problem of Drought & Famine. 20 %

Unit : 3 Government Approach for Rural Development, major Rural Development Programmes. Evaluation of strategy for Rural Development. Suggestions For the success of Rural Development – Strategy. Rall of NGO’s in Rural Development – Scope, Role limitations, suggestions. 25 %

Unit : 4 Rural infrastructure – Development – salient features, problems and Remedial Measures. 15 %

Unit : 5 Food security in India – concept of Food security, Food self – sufficiency and Food security in India – Public Distribution system (PDS) and its impact on Poverty alleviation Evolution of PDS. 20%

References :-

1. C. M. Chaudhari, Rural Economics – Sublime publication – Jaipur.
2. P. C. Bansal – Eco. Prob. Of Indian Agri.
3. Sndharam L. S. – Rural Development.
4. Vasant Desai – Fundamentals of Rural Development.
5. John Harris – Rural Development.
6. Ishwar Dhingra – The Indian Economy – Environment & Policy.
7. Kartarsingh – Rural Development.

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.	III	ELECTIVE-7	16070302030700	Environmental Economics	2	30	70	--	2.5 Hrs

Title :- Environmental Economics

Objectives :-

1. To acquaint student with. The basic Theories of Environment Economics.
2. To appraise and sensitive student about major Environmental issues of India.
3. Develop skill to analyse them with the help of appropriate theoretical frames.

Theory : **100%**

Unit : 1 Meaning of environment Economics, various definition and nature of Environment economics meaning, Definition and features of planning. 20 %

Unit : 2 Relation between environment and development. Theory of sustainable Development and problems of operationalising this theory. 20 %

Unit : 3 Agriculture development and environment problems. Changing land use and Cropping pattern and environmental issues. The problems of grazing – land. The problem of conservation of forest and biodiversity. Supply and quality Of ground water and its management. 20 %

Unit : 4 Change in growth and structure of industries in India. Growth of pollutant Industries problems of air and water pollution management of solid and liquid Wastes. 20 %

Unit : 5 Environment policy in India important environmental laws. Natural Resources And Agriculture Development Policy. 20 %

References :-

1. Development & Environment Economics – Dr. Mahesh Joshi
2. Agricultural Economics – S. O. Shrivestara.

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.	III	ELECTIVE-7	16070302030800	Crop Diseases and weed control	2	30	70	--	2.5 Hrs

Title:- Crop Disease and Weed-control

Objectives:-

1. To aware the students about plant diseases
2. To introduce the students about the causes, infection and symptoms of diseases in plants.
3. To inform the students about detailed control measures of plant diseases.
4. To aware the students about weed and weed control.

Theory:-

100%

Unit-1 What is diseases? Its importance, classification, causes, infection and dispersal 20%

Unit:-2 Introductory study to Bacteria, Fungi and Viruses. 20%

Unit:-3 Study of symptoms of plant diseases. 20%

Unit:-4 Principles of diseases control and chemical use in disease control. 20%

Unit:-5 Weed and weed control 20%

5.1 Definition and classification of weed

5.2 De-merits of weed

5.3 Uses of weed

5.4 Dispersal of Weed

References:

1. Plant Disease (6th edition)
-R.S.Singh
2. Disease of crop plant in India
-G. Rangaswami
3. Principles and procedures of plant protection (3rd Edition)
- S. B. Chattopadhyay
4. Introduction to principles of plant pathology (3rd Edition)
- R. S. Singh
5. Sampurna Pak Sanrakshan Part-II (Gujarati Edition)
- Babubhai Avarani

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.	III	ELECTIVE-7	16070302030900	Rural Extension	2	30	70	--	2.5 Hrs

Title: Rural Extension

હેતુઓ:-

- (૧) વિદ્યાર્થીઓમાં વહિવટ અંગેની સમજ કેળવાય.
- (૨) વિદ્યાર્થીઓ અસરકારક વહિવટની ખાસિયતોથી પરિચિત બને.
- (૩) વિદ્યાર્થીઓ વહિવટના અસરકારક સિધ્ધાંતોથી પરિચિત બની તેનો અમલ કરે.
- (૪) વિદ્યાર્થીઓ અસરકારક વહિવટ કરનારની ખાસિયતોથી માહિતગાર બને.

અભ્યાસક્રમ

એકમ :- ૧ વહિવટ ૧૦ %
અર્થ, ભારતમાં વહિવટીતંત્ર પ્રથાનો વિકાસ.

વહિવટના પ્રકાર :-

૧. કેન્દ્રિયત વહિવટ: તેના ફાયદા અને ગેરફાયદા.
૧. વિકેન્દ્રિયત વહિવટ: તેના ફાયદા અને ગેરફાયદા

એકમ :- ૨ કેન્દ્રિયત અને વિકેન્દ્રિય વહિવટના પરિબળો. ૧૦ %
૧. વહિવટી પરીબળો.
૨. ફરજ અંગેના પરિબળો.
૩. બાહ્ય પરિબળો
૪. જવાબદારી.

એકમ :- ૩ વહિવટીતંત્રનું કાર્યક્ષેત્ર ૨૦ %
૧. આયોજન
૨. સંગઠન
૩. મહેકમ
૪. નિર્દેશન
૫. સંકલન
૬. દેખરેખ
૭. અહેવાલ તૈયાર કરવો. ૮. અંદાજપત્ર
૯. મૂલ્યાંકન
૧૦. જવાબદારી.

એકમ :- ૪	વહિવટના સિધ્ધાંતો:	૪૦ %
	૧. સંકલનનો સિધ્ધાંત.	
	૨. જવાબદારી અને સત્તાનો સિધ્ધાંત	
	૩. આદેશમાં એકતાનો સિધ્ધાંત.	
	૪. સ્ટાફનો સિધ્ધાંત.	
	૫. નિયંત્રણનો સિધ્ધાંત.	
	૬. પ્રોત્સાહનનો સિધ્ધાંત	

એકમ :- ૫	વહિવટમાં ખાસિયતો:	૨૦ %
	૧. અસરકારક વહિવટની ખાસિયતો.	
	૨. અસરકારક વહિવટ કરનારની ખાસિયત.	

સદર્ભ ગ્રંથો:-

૧. કૃષિ વિસ્તરણ શિક્ષણ અ ઈશ્વરભાઈ પટેલ
૨. વિસ્તરણ શિક્ષણના મુળતત્વો - પ્રો. ધીરજ ધકાણ

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.	III	ELECTIVE-8	16070402031000	Principal of social reconstruction	2	30	70	--	2.5 Hrs

Title: સમાજ નવનિર્માણના સિધ્ધાંતો અને પધ્ધતિઓ

હેતુઓ:-

- (૧) વિદ્યાર્થીઓ હિંદુ ધર્મ અને તેના સાહિત્યથી પરિચિત થાય.
- (૨) વિદ્યાર્થીઓ ઈશુ, મહાવીરના જીવનથી પરિચિત થાય.
- (૩) વિદ્યાર્થીઓ બ્રહ્મોસમાજ, આર્યસમાજ, પ્રાર્થના સમાજ વગેરેનું જ્ઞાન મેળવે.
- (૪) વિદ્યાર્થીઓ સ્વાધ્યાય અને સ્વામીનારાયણ સંપ્રદાયનું જ્ઞાન મેળવે.

અભ્યાસક્રમ

એકમ :- ૧	હિંદુ ધર્મ ૧. શ્રુતિ અને સ્મૃતિ સાહિત્ય ૨. પંચ પ્રાણનો ખ્યાલ. ૩. રામાયણ, મહાભારતનો સામાજિક અભિગમ. ૪. ભાગવદ્ ગીતાનો માનવ ધર્મનો ખ્યાલ	૨૫ %
એકમ :- ૨	યહુદી, ખ્રીસ્તી અને જૈન ધર્મ ૧. યહુદીના સ્થાપકનું જીવન અને ઉપદેશ ૨. ઈશુનું જીવન અને ઉપદેશ ૩. મહાવિર સ્વામીનું જીવન અને તેના સિધ્ધાંતો	૨૦ %
એકમ :- ૩	બૌદ્ધ અને ઈસ્લામ ધર્મ ૧. ગૌતમ બુદ્ધનું જીવન અને આર્યઅષ્ટાંગ માર્ગ ૨. મહમદ પયગંબરનું જીવન અને ઈસ્લામનો સિધ્ધાંતો	૨૦ %
એકમ :- ૪	સમાજ સુધારણામાં ફાળો. ૧. બ્રહ્મો સમાજ ૨. આર્ય સમાજ ૩. પ્રાર્થના સમાજ	૨૦ %

એકમ :- ૫ સમાજ સુધારણા અને સામાજિક પરિવર્તન

૨૦ %

૧. થિયોસોફીકલ સોસાયટી

૨. સ્વાધ્યાય પ્રવૃત્તિ

૩. સ્વામીનારાયણ સંપ્રદાય

સદર્ભ ગ્રંથો:-

૧. જગતના વિદ્યમાન ધર્મો - જે. એ યાંજીક

૨. જગતના ધર્મો - બી. જી. દેસાઈ

૩. આપણો ધર્મ - આ. બા. ધૃવ

૪. જૈન દર્શન - ઝેડ. વી. કોઠારી

૫. બૌદ્ધ દર્શન - એમ. કે ભટ્ટ

૬. ધર્મનું તુલનાત્મક અધ્યયન - બી. જી. દેસાઈ

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.	III	ELECTIVE-8	16070402031100	Disaster management	2	30	70	--	2.5 Hrs

Title :- Disaster Management

Objectives :-

1. To understand the natural disaster.
2. To know remedial steps in disaster.
3. To know organizations working in disaster management.
4. To understand civilian responsibility in disaster.

Theory : **100%**

Unit : 1 Disaster Management. 30 %

1. Introduction
2. Natural Disaster
3. Man – made Disaster

Unit : 2 Disaster management – Nature and working system. 20 %

1. Disaster management policy
2. Disaster management plan
3. Disaster relief and rescue management

Unit : 3 Disaster management and voluntary services organization. 20 %

1. Role of voluntary organization in Disaster management
2. Some Hints to voluntary organization

Unit : 4 **Some points related to Disaster management.** 20 %

1. Disaster management Education
2. Disaster management Research
3. Some problems related to Disaster management

Unit : 5 Disaster management – some experiences

10 %

1. Disaster management in Gujarat

References :-

1. Disaster management – Dr. Ramnik J. Yadav
2. Essentials of Environment & Seismic Engineering – Dr. M. B. Gohil,
Anil K. Papat
3. પર્યાવરણ અધ્યયન – UGC Arech Bharucha.

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.	III	ELECTIVE-8	16070402031200	Social Engineering	2	30	70	--	2.5 Hrs

Title: Social Engineering

Objectives

1. to know structure of social engineering
2. to know current status of social engineering
3. to understand importance of marriage in ancient and current perspectives

Course: 100%

UNIT-1 20%

- Social-Engineering: Meaning, message and purpose.
- Definition of individual, group, society and community
Properties of Human potential E.g., Emotion intelligence (E.I.) and Spiritual Intelligence (SI)

UNIT -2 20%

- Social – Engineering : Current status
- Tools of Social – Engineering and linking it with development devices.
- Status and role of family structure in sustainable social development.

UNIT-3 20%

- Marriage – as a tool of multiplying development devices.
- Ancient Indian approaches in marriages settlements.
- Current status of marriage institutions
- Marriage concerned Indian laws.

UNIT-4 20%

- Group – Dynamics – meaning role and strategies
- Team: Definition, purpose and role
- Strategies of Team – building and task allotment
- S.H.G. as a tool of current rural development; SWOT Analysis.

Strategy for creating Social Engineering in India:

- Cutting edge Phase-1 (Next Five Years)
- Cutting edge for Phase – 2 (Next Ten Years)
- Cutting edge for Phase – 3 (Next Fifteen years)

સંદર્ભગ્રંથ:-

૧. ગ્રામીણ અને નગર સમાજશાસ્ત્ર - પ્રો. એ.જી. શાહ અને પ્રો. જે.કે. દવે
૨. ગ્રામીણ સમાજશાસ્ત્ર - પ્રો. એ.જી. શાહ
૩. સામુદાયીક વિકાસ અને કૃષિ વિસ્તરણ - બાબુભાઈ અવરાણી

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.	III	ELECTIVE-9	16070502031300	Research Methodology	2	30	70	--	2.5 Hrs

Title: સંશોધન પધ્ધતિઓ

હેતુઓ:-

- (૧) સંશોધનની ટેકનીકનો ઉપયોગ કરીને વિદ્યાર્થીમાં વૈજ્ઞાનિક વલણ વિકસાવું.
- (૨) સંશોધન અને વિજ્ઞાન વચ્ચેનો સબંધ જાણવો.
- (૩) સામાજિક ક્ષેત્રે સંશોધનનું સ્થાન અને મહત્વ જાણવું
- (૪) સંશોધન દ્વારા સાચા જ્ઞાન વશે જાણવું.

અભ્યાસક્રમ

- એકમ :- ૧** વિજ્ઞાનનો અર્થ, વ્યાખ્યા, લક્ષણો તથા સંશોધનમાં સમષ્ટીનું મહત્વ, અર્થ અને તેના પ્રકારો. ૨૦ %
- એકમ :- ૨** સામાજિક સંશોધનનું મહત્વ અને તેના હેતુઓ. ૨૦ %
- એકમ :- ૩** સંશોધનમાં માહિતીનું મહત્વ તેનો અર્થ, પ્રકાર, ગૌણ માહિતી અને પ્રાથમિક માહિતી, તેના સ્ત્રોત, અર્થ અને ક્ષેત્રીય સ્ત્રોતનો અર્થ અને મહત્વ. ૨૦ %
- એકમ :- ૪** સંશોધનમાં માહિતી એકત્ર કરવાની પધ્ધતિઓમાં ૧. નિરીક્ષણ ૨. પ્રશ્નાવલી. ૩. મૂલાકાત - દરેકનો અર્થ, ઉપયોગીતા પ્રકાર, તેની લાક્ષણિકતા અને તેની મર્યાદા ૨૦ %
- એકમ :- ૫** (એ) સંશોધનમાં માહિતી રજૂ કરવા.
૧. કોષ્ટીકરણ - તેનો અર્થ, પ્રકાર અને તેનું મહત્વ.
૨. આકૃતિઓ - ચિત્રાત્મક રજૂઆત, તેનું મહત્વ અને તેના પ્રકારો.
(બી) સંશોધનમાં અહેવાલનું આલેખન તેનો અર્થ, મહત્વ, વાચક વર્ગ, લેખનશૈલી, સંશોધન લેખ, સારાંશ અહેવાલ ૨૦ %

સદર્ભ ગ્રંથો:-

૧. સામાજિક સંશોધન પધ્ધતિઓ - ડૉ. અરવિંદ દેસાઈ
૨. સંશોધન પધ્ધતિઓ - ડૉ. દવે.
૩. સમાજ શાસ્ત્રની સંશોધન પધ્ધતિઓ - પ્રો એ.જી. શાહ
૪. સંશોધન પ્રણાલી - ડૉ. વિજય હરારે
૫. સંશોધન ડિઝાઈન - ડૉ. વિમલ શાહ
૬. સંશોધન અહેવાલ - ડૉ. વિમલ શાહ
- સંશોધન પધ્ધતિઓ અને પ્રવિધિઓ - ડૉ. હરીભાઈ દેસાઈ

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.	III	ELECTIVE-9	16070502031400	Rural marketing management	2	30	70	--	2.5 Hrs

Title: Rural Marketing Management

OBJECTIVE:

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 Concept of rural marketing, need of rural marketing, rural market segmentation

Concept of rural consumer behavior, research in rural consumer behavior, method of conducting rural marketing research 20%

UNIT -2 Product Planning: Product mix and product life cycle, product diversification.

Product Pricing, pricing strategies 20%

UNIT-3 Distribution channels in rural marketing, advertising for rural marketing 20%

UNIT-4 Basic principles of processing and reservation, value addition and quality control,

Grading and Packaging 20%

UNIT -5 Case study on 'multi-nationals in rural marketing'

Case study on 'NGOs in Rural Marketing'

Case study on "Social Marketing" 20%

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

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.	III	ELECTIVE-9	16070502031500	N.G.O Management	2	30	70	--	2.5 Hrs

Title: N.G.O. MANAGEMENT

Objectives:

1. To know about NGO and its evolution.
2. To understand functioning of NGO.
3. To know NGO movement in India and its achievements.

Course:

100%

UNIT-1

20%

- Introduction of NGOs, V.O., C.G.O., G.O., N.G.Os.,
- History of Voluntary Action in India
- People's Movement and Development Action.

UNIT-2

20%

- Phases of NGO Movement,
- Types of NGOs
- Current Govt. Policy on NGOs involvement.

UNIT-3

Case Studies on NGOs Movement

20%

1. Chipko Movement.
2. Narmada Bachao Movement.
3. KSSP Movement.
4. Kundrakudi Movement.
5. Hamara Ghar Hamara Raj.
6. Feminist Movement.
7. Tehari Dam Movement.
8. Sariska Bachao Movement.
9. Ganga Bachao Movement.
10. Jal Jangal Jameen Andolan.
11. Bandhua Majdoor Andolan.

UNIT-4	Management of N.G.O	20%
	<ul style="list-style-type: none"> • Registration of NGO. • FCRA. • Income Tax Exemption 80 G. • Financial Management. • Annual Report Writing. • FERRA. 	

UNIT-5	Project Management	20%
	<ul style="list-style-type: none"> • Project Formulation • Project Monitoring • Training of NGO's Functions. • Human Resource Management on NGO's • Funding Agencies and their Format/Guidelines. 	

Reference

1. “Kudrati sampati ane vavyashapan” (Gujarati Edition) - Babubhai Avarani
2. “Gram Swavikash” (Gujarati Edition) - Babubhai Avarani
3. “Gram vikash karyakram ane yojnao” (Gujarati Edition)- R. B. Matariya.

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-IV

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

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	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:

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.

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.

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	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.

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	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.
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	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 Cowtries.
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 - વિહલદાસ મગનલાલ કોઠારી
૨. ગાંધીવાદી જીવનદર્શન અને અર્થ વ્યવસ્થા - રમેશભાઈ બી. શાહ
૩. ગાંધીજીનું ધર્મદર્શન - મગનભાઈ જો. 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.

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	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

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 - 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

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.

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 - 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

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 - 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 measures. 20 %

References :-

1. Rudder 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.