

BHAKTA KAVI NARSINH MEHTA UNIVERSITY JUNAGADH



Faculty of Arts

Board of Studies – Rural Studies

Draft Syllabus

Master of Rural Studies

(Semester-I & IV)

(Effective from June, 2018 onwards)

B.K.N.M. UNIVERSITY
P. G. (M.R.S.) CENTER
B.K.N.M. UNIVERSITY – JUNAGADH
Choice Based Credit System (CBCS) Course
OF
MASTER OF RURAL STUDIES (NEW-2019)

VISION:-

The rural faculty of Bhakta Kavi Narsinh Mehta 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.
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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 Bhakta Kavi Narsinh Mehta 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 weight age 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 Bhakta Kavi Narsinh Mehta University – Junagadh.

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
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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		Foundation-1	2	30	70	100	Rural Technology
2		Core-1	2	30	70	100	1.Agronomy-1
			2	30	70	100	2. Horticulture & Forestry -1
			2	30	70	100	3.Animal Husbandry-1
			2	30	70	100	4.Rural Extension-1
			2	30	70	100	5. Rural Economics-1
3		Elective-1	2	30	70	100	1. Water Resource Management
			2	30	70	100	2. Pomology
			2	30	70	100	3. Philosophy and Contents of Extension
4		Elective-2	2	30	70	100	1.Concept of social reconstruction
			2	30	70	100	2.Rural development in India
			2	30	70	100	3.Olericulture
5		Elective-3	2	30	70	100	1. Natural Recourses and Management
			2	30	70	100	2.Sociology of Tribal Society
			2	30	70	100	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		Foundation-2	2	30	70	100	Rural Development
2		Core-2	2	30	70	100	1. Agronomy-2
			2	30	70	100	2. Horticulture & Forestry -2
			2	30	70	100	3. Animal Husbandry-2
			2	30	70	100	4. Rural Extension-2
			2	30	70	100	5. Rural Economics-2
3		Elective-4	2	30	70	100	1. Poultry Production
			2	30	70	100	2. Leadership in Extension Education
			2	30	70	100	3. Forestry
4		Elective-5	2	30	70	100	1. Computer application
			2	30	70	100	2. Floriculture
			2	30	70	100	3. Personality Development
5		Elective-6	2	30	70	100	1. Study of Greats
			2	30	70	100	2. English
			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		Foundation-3	2	30	70	100	Scientific and Technical Writing
2		Core-3	2 2 2 2 2	30 30 30 30 30	70 70 70 70 70	100 100 100 100 100	1. Agronomy-3 2. Horticulture & Forestry -3 3. Animal Husbandry-3 4. Rural Extension-3 5. Rural Economics-3
3		Elective-7	2 2 2	30 30 30	70 70 70	100 100 100	1. Environmental Economics 2. Crop Disease and Weed Control 3. Rural Extension
4		Elective-8	2 2 2	30 30 30	70 70 70	100 100 100	1. Principals of Social Reconstruction 2. Disaster Management 3. Social Engineering
5		Elective-9	2 2	30 30	70 70	100 100	1. Research Methodology 2. Rural Marketing
			2	30	70	100	Management 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		Foundation-4	2	30	70	100	Rural Industrialization
2		Core-4	2	30	70	100	1. Agronomy-4
			2	30	70	100	2. Horticulture & Forestry -4
			2	30	70	100	3. Animal Husbandry-4
			2	30	70	100	4. Rural Extension-4
			2	30	70	100	5. Rural Economics-4
3		Elective-10	2	30	70	100	1. Value Addition in Agriculture produce
			2	30	70	100	2. Theories of Economic Development
			2	30	70	100	3. Animal Care and Handling
4		Elective-11	2	30	70	100	1. Gandhian approach to rural development
			2	30	70	100	2. Agri. Business Management
			2	30	70	100	3. Managerial Economics
5		Elective-12	2	30	70	100	1. Biotechnology in Plants and Animals
			2	30	70	100	2. Integrated Insect Management
			2	30	70	100	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
	2	70	B	8	2x8=16
	2	50	D	6	2x6=12
	2	70	B	8	2x8=16
	2	75	B	8	2x8=16
	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
	2	69	C	7	2x7=14
	2	50	D	6	2x6=12
	2	70	B	8	2x8=16

	2	40	E	5	2x5=10
	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
	2	58	D	6	2x6=12
	2	50	D	6	2x6=12
	2	70	B	8	2x8=16
	2	55	D	6	2x6=12
	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

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

In the present example : CGPA

$$72 + 70 + 62 + 68$$

$$10 + 10 + 10 + 10$$

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

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		Foundation-1	2	30	70	100	Rural Technology
2		Core-1	2	30	70	100	1.Agronomy-1
			2	30	70	100	2. Horticulture & Forestry -1
			2	30	70	100	3.Animal Husbandry-1
			2	30	70	100	4.Rural Extension-1
			2	30	70	100	5. Rural Economics-1
3		Elective-1	2	30	70	100	1. Water Resource Management
			2	30	70	100	2. Pomology
			2	30	70	100	3. Philosophy and Contents of Extension
4		Elective-2	2	30	70	100	1.Concept of social reconstruction
			2	30	70	100	2.Rural development in India
			2	30	70	100	3.Olericulture
5		Elective-3	2	30	70	100	1. Natural Recourses and Management
			2	30	70	100	2.Sociology of Tribal Society 3.Reproduction in Farm

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		Rural Technology	2	30	70	-	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

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

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		Agronomy-1	2	30	70	-	2.5 Hrs

Title: Research Design in Agriculture

Objectives:-

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

Theory :

Unit – 1	Questionnaire : Definition and meaning of questionnaire 1.1 Characteristics of questionnaire 1.2 Merits of demerits of questionnaire 1.3 Kinds of questionnaire	20%
Unit – 2	Sampling : 2.1 What is sampling 2.2 Importance of sampling 2.3 Methods of sampling	20%
Unit – 3	Important definitions used in field experiments, design and principles of field experiments.	20%
Unit – 4	Field experimental design : 4.1 Aims and classification of experimental design and uniformity trials 4.2 Simple designs of experiments 4.2.1 Paired design of experiment 4.2.2 Completely Randomized Design 4.2.3. Randomized Block Design 4.2.4 Latin Square Design	20%
Unit – 5	Care to be taken during field experiments	20%

References:-

1. “Kshetra Prayog ni Karya Paddhati” (Gujarati Edition)
- Dr. Ambalal Sendhabhai Patel & Shri Mahesh RamnikbhaiVaishnav
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

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		Horticulture & Forestry	2	30	70	-	2.5 Hrs

Title : Pomology

Objective :

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

Theory :

- Unit – 1** Importance pest management in fruit crops e.g. Mango, Sapota, Coconut, Banana, guava, Pomegranate etc. 20%
- Unit – 2** - Organic faming in horticulture crops 20%
-Zero budget farming in horticulture Crops.
- Unit – 3** - Horticulture in urban area. 20%
-Air pollution, it's effects and role of horticulture to reduce air pollution.
- Unit – 4** Cultivation of new crops in Gujarat. 20%
1. Fig
2. Oil palm
3. Stevie
- Unit – 5** Cultivation of new crops in Gujarat. 20%
1. Vanilla
2. Grapes
3. Cashew nut

Reference :

- (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

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		Animal Husbandry-1	2	30	70	-	2.5 Hrs

Title: Animal Breeding & Genealogy

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

- Breeding : Classification of Breeding
- Selection Criteria of breeding bull / before and after puberty age.
- Diseases of Genital system, Pyometra, Metritis, cervicitis, Vaginitis, proleps, Retaintion, Placeuta, etc.
- Common problem related to breeding Anoestrus, delayed estrus, Freonatin cysticoverly repeat breeding etc.
- Fertility affecting the breeding efficiency & step to promote to B.E. and important point for successful fertility.

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
5. Adhunik Nafakarak Pashupal – BAIF
6. Krutrim Virydan & Pashu Prathmik Sarvar – Samul Dairy

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		Rural Extension-1	2	30	70	-	2.5 Hrs

Title : ગ્રામીણ વિકાસ

હેતુઓ :

- ગ્રામ વિકાસનો ઇતિહાસ જાણી વિવિધ ક્યોંક્રમો ની માહિતી મેળવે.
- સ્થાનિક કક્ષાએ કામ કરતી સંસ્થાઓનો પરિચય કેળવે (સરકારી – બિન સરકારી)
- કૃષિ અને પશુપાલન વિકાસની વિવિધ યોજનાની જાણકારી મેળવે.

અભ્યાસક્રમ :

- ભારતમાં સ્વત્રંતા પછી ગ્રામ વિકાસ નો ઇતિહાસ, ગ્રામ વિકાસ કાર્યક્રમોમાં હેતુઓ અને ગ્રામ વિકાસના થયેલા ક્યોં.
- ગ્રામ વિકાસ માટે કામકરતી વિવિધ સંસ્થાઓનો પરિચય અને કાર્યો – DRDA – સહકારી બેંક- સહકારી મંડળીઓ.
- વ્યક્તિગત વિકાસ અને સામુહિક વિકાસ માટે ધિરાણ અને સબસીડી જેવી મદદો
- કૃષિ વિકાસ અને પશુપાલન વિકાસ માટેની વિવિધ યોજનાઓ
- ગ્રામ વિકાસમાં સ્વેચ્છિક સંસ્થાઓની ભાગીદારી, કાર્યક્ષેત્ર અને પ્રવૃત્તિઓ.

સિદ્ધિઓ :

- ગ્રામ વિકાસની યોજનાઓના અમલીકરણ માં જોડાય.
- સાકરી ખાતામાં જોડાઈ ગ્રામ વિકાસને પ્રોત્સાહન આપે.
- ગ્રામ વિકાસ માટે સ્વેચ્છિક સંસ્થાઓમાં ભળી ને કામ કરવું.

સંદર્ભગ્રંથો :

- ભારતની સામાજિક સંસ્થાઓ - શાહ અને જોષી
- કૃષિ અર્થશાસ્ત્ર - ડૉ. મહેશ જોષી
- ભારતમાં ગ્રામ વિકાસ - બાબુભાઈ આવરાણી

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		Rural Economics-1	2	30	70	-	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. Economics & enable them 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

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		Water Resource Management	2	30	70	-	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 :

Unit : 1 Introduction to water Resource Management

- 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

- 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

Unit : 3 Watershed Management

- 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.

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

Unit : 5 Advance Water Application Method

6.1 Function of irrigation water.

6.2 Sprinkler irrigation system

Classification of irrigation system

Advantages of irrigation system

6.3 Drip irrigation system

Part of Drip irrigation system

Advantages of drip irrigation system

Disadvantages of drip irrigation system

6.4 Visit to a farm and practical.

Study of drip irrigation.

6.5 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 આવરાણી
4. Rain water Harvesting – Arnold Racey.

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		Pomology	2	30	70	-	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	Definition, importance, scope, and problems of fruits	10 %
Unit: 2	Planting - Care 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

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		Philosophy and Contents of Extension	2	30	70	-	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: ૨૦ %
૧. વિસ્તરણ શિક્ષણના તત્વો.
 ૨. વિસ્તરણ શિક્ષણનું મહત્વ.
 ૩. વિસ્તરણ શિક્ષણનું કાર્યક્ષેત્ર.
- એકમ :- ૨** વિસ્તરણ શિક્ષણના સિધ્ધાંતો: ૨૦ %
૧. વિસ્તરણ શિક્ષણનો ઇતિહાસ.
 ૨. વિસ્તરણ શિક્ષણ પ્રક્રિયાના સોપાન.
 ૩. વિસ્તરણ શિક્ષણનું તત્વજ્ઞાન.
- એકમ :- ૩** પરદેશમાં વિસ્તરણ શિક્ષણ સેવાઓ : ૨૦ %
૧. અમેરીકા ૨. ફિલીપાઈન્સ. ૩. જાપાન ૪. બર્મા
- એકમ :- ૪** ભારતીય ગ્રામીણ સમાજ ૨૦ %
૧. ભારતય ગ્રામરચના.
 ૨. ગ્રામ વ્યવસ્થાના પ્રકાર.
 ૩. જ્ઞાતિપ્રથા.
 ૪. ગ્રામ સમાજના લક્ષણો.

એકમ : ૫ સામુદાયિક વિકાસ કાર્યકરનું કર્તવ્ય :

૧. ભોમિયા તરીકે ૨. કાર્યસહાયક તરીકે ૩. નિષ્ણાંત તરીકે ૪. ચિકિત્સક તરીકે.

સદર્ભ ગ્રંથો:—

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

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	70	-	2.5 Hrs

Title: Concept of Social Reconstruction

હેતુઓ :

૧. વિદ્યાર્થીઓ સમજ નવનિર્માણ નં જ્ઞાન મેળવે.
૨. વિદ્યાર્થીઓ રાજકીય તત્વ ચિંતન ની શરૂઆત જાણે.
૩. વિદ્યાર્થીઓ વિવિધ ક્રાંતિ થી પરિચય બને.

ક્ષમતાઓ

૧. નદીજેમ સતત વહે છે તેમજ તેવીજ રીત થી જીવનપણ સતત વહેતુ રહે છે તેવી સમજણ મેળવે.
૨. ઘસારો અને નવરચના જીવનના જ ભાગ છે તેને સહજતાથી અપનાવી જીવન ઘડે.
૩. વિવિધક્રાંતિ અને મહાપુરુષોના જીવનમાંથી મુશ્કેલ પરિસ્થિતિ વચ્ચેથી રસ્તોકાઢતાશીખે.
૪. મૂલ્યવાનજીવન જ શ્રેષ્ઠ છે તે સમજે.

આભ્યાસક્રમ :

Unit-1. ગ્રીસમાં થયેલ રાજકીય ચિંતનને પરિણામે સમાજનવનિર્માણની પ્રક્રિયાની શરૂઆતી સમજણ સોક્રેટિસ, પ્લેટો, એરિસ્ટોટલનો માત્ર પરિચય . 10%

Unit -2 સમાજનવનિર્માણની સમજણ, સમાજ માં શામાટે તેની જરૂરિયાત છે ? સમાજનવનિર્માણ નું સ્વરૂપ અને તેનું કાર્યક્ષેત્ર. 15%

Unit -3 સમાજનવનિર્માણની પ્રક્રિયા ના ભાગરૂપે થયેલી વિવિધ ક્રાંતિ.
 ૧. ફ્રાંસક્રાંતિ- થવા ના કારણો, તેનીઅસર
 ૨. અમેરિકનક્રાંતિ- થવા ના કારણો તેની અસર.
 ૩. રશિયનક્રાંતિ – થવા ના કારણો તેની અસર. 35%

Unit -4 નેપોલિયનબોનાપાર્ટ, જ્યોર્જવોશિંગ્ટન, જોસેફસ્ટાલિન, લેનિન, વગેરે નો સત્તા દ્વારા સામાજિક ક્રાંતિ કરવાનો પ્રયત્ન. 20%

Unit-5 બીજુંવિશ્વયુદ્ધ- ક્રાંતિ ની પ્રક્રિયાના ભાગરૂપે, તેનું રાજકીય સ્વરૂપ, સમાજ પર વિઘાતક અસરો હિટલર, મુસોલીની નો પરિચય. 20%

સંદર્ભ ગ્રંથો :

૧. વિશ્વનો ઇતિહાસ - ડૉ. જી. ધારૈયા
૨. રાજનૈતિક સિદ્ધાંતોનો ઇતિહાસ - જ્યોજ સેબાઈન
૩. પાશ્ચાત્ય તત્વ ચિંતન - હરસિંધ મ. જોષી
૪. ઇતિહાસ કથાઓ ગ્રીસ ૧, ૨ - દર્શક
૫. સોક્રેટિસ - દર્શક

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		Rural Development in India	2	30	70	-	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 | - Bilsrami SAR |
| 2. Agricultural Problems in India | - Sadhu and Sing |
| 3. Rural Development | - Sundharam I.S. |
| 4. Indian Agricultural Economics | - Rudra A |

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		Olericulture	2	30	70	-	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	Definition, 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 vigyan ” (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.

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		Natural Resources and management	2	30	70	-	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 jagiye paryavaran bachaviye - Dr.Rameshchandra J. Bhayani.
6. Kudarat Sampati vikat andvyavasthapan - Babubhai avarani

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		Sociology of Tribal Society	2	30	70	-	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

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		Reproduction in Farm Animals	2	30	70	-	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.

Course :

- Unit – 1 :** Male Reproductive System: Organs 20%
- Unit – 2 :** Female Reproductive System: Organs and Hormones related to Reproduction 20%
- Unit – 3 :** Estrus Cycle and Ovulation 20%
- Unit – 4 :** Artificial insemination : merits demerits collection, evaluation, dilution methods. 20%
- Unit – 5 :** Effect of Nutritional element on breeding efficiency like, protein carbohydrate for vitamins & minerals. 20%

Reference book :

1. Pashu Samvardhan -R. K. Shukal
2. Pashu Vyavastha – Arun D. Dave
3. Principles and practices of dairy farm management – Jagdish Pradhad
4. Animal Genomics and Breeding - BAIF
5. A Hand Book of Animal Husbandry – ICAR New Delhi

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-II

Sr No	Course Code	Course Category	C	IM	EM	TM	Course Title
1		Foundation-2	2	30	70	100	Rural Development
2		Core-2	2	30	70	100	1. Agronomy-2
			2	30	70	100	2. Horticulture & Forestry -2
			2	30	70	100	3. Animal Husbandry-2
			2	30	70	100	4. Rural Extension-2
			2	30	70	100	5. Rural Economics-2
3		Elective-4	2	30	70	100	1. Poultry Production
			2	30	70	100	2. Leadership in Extension Education
			2	30	70	100	3. Forestry
4		Elective-5	2	30	70	100	1. Computer application
			2	30	70	100	2. Floriculture
			2	30	70	100	3. Personality Development
5		Elective-6	2	30	70	100	1. Study of Greats
			2	30	70	100	2. English
			2	30	70	100	3. Economics of Cooperation

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		Rural Development –	2	30	70	-	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 Developments meaning and Definition.
- Sustainable Developments 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.

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		Agronomy -2	2	30	70	-	2.5 Hrs

Title: Advance Agronomy

1. To Know the Advance technique in Agronomy
2. To provide knowledge of progressive farming

Unit: 1 Organic farming. 20%

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

Unit: 2 Hydroponics 20%

- Definition & Introduction
- History of Hydroponics
- Method of Hydroponics
- Advantages of Hydroponics

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

Unit :5 Satat Pak Padhdhati 20%

Reference Books :

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

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		Horticulture & Forestry -2	2	30	70	-	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 :

Unit – 1 Definition, 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. 20%
 - Importance of plant growth regulator in vegetables
 - Preservation of vegetables

References :

(1) “ Shakhaji vigyan ” (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

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		Animal Husbandry – 2	2	30	70	-	2.5 Hrs

Title :- Animal Feeds and Nutrition

Objectives :

1. To learn Importance of Feeds and Nutrition.
2. To understand the concentrates.
3. To understand the Animal Nutrition

Theory :

Unit – 1 : Composition and classification of feed stuffs :- Roughages : Dry and Succulent. 20%

Unit – 2 : Concentrates :- Energy rich and protein rich :- Energy rich concentrates 20%

Unit – 3 : Protein rich concentrates : Plant, Animal & NPN feed stuffs. 20%

Unit – 4 : Unconventional Livestock feeds in India 20%

- Vegetable protein sources.
- Animal protein sources.
- Energy sources
- Miscellaneous feeds.

Unit – 5 : Nutrients of feeding stuffs and animal body : water, carbohydrates, protein, Lipids and minerals. 20%

Reference Books :

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

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		Rural Extension -2	2	30	70	-	2.5 Hrs

Title : ગ્રામ વિકાસની યોજનાઓ

હેતુઓ

1. પંચવર્ષીય યોજનાઓની માહિતી એકત્રિત કરવી.
2. આદીજાતી વિસ્તાર વિકાસના કાર્યક્રમો જાણવા.
3. ગ્રામીણ વિસ્તારમાં કાર્યરત વિવિધ યોજના વિશે જાણકારી પ્રાપ્ત કરવી.

અભ્યાસક્રમ :

1. આદિજાતી વિસ્તાર વિકાસ તથા અનુસૂચિત જનજાતિના ખેડૂતોના વિકાસની યોજનાઓ.
2. જળ અને જમીન સંરક્ષણની યોજનાઓ (ખેત તલાવડી અને વોટરશેડ યોજના)
3. પછાત લોકોના વિકાસ માટેની યોજનાઓ. (નરેગા, એસજીએસવાય, વીમા યોજનાઓ, સફાઈઅભિયાન, આવાસ યોજના વગેરે)
4. કૃષિમાં યાંત્રિકરણ માટેની યોજનાઓ.
(ખેડ માટેના ઓજારો, વાવણી, પિયત, નીંદણ, કાપણી, પાકસંરક્ષણ માટેના ઓજારો)
5. ગ્રામવિકાસના સંદર્ભે છેલ્લી પંચવર્ષીય યોજનાનો ખ્યાલ, હેતુઓ અને સિદ્ધિઓ

લક્ષ્યાંકસિદ્ધિ:

1. પંચવર્ષીય યોજનાઓની જાણકારી મેળવી ગ્રામવિકાસમાં મળેલી સફળતાઓ સમજી ગ્રામઆયોજનમાં ભાગલે.
2. વિવિધ યોજનાઓની માહિતી પ્રાપ્ત કર્યા પછી જરૂરિયાત પ્રમાણે લોકોને તેનો લાભ અપાવવા મદદરૂપ થાય
3. જળ-જમીન સંરક્ષણના પગલાં દ્વારા ગ્રામ વિસ્તારોમાં જાગૃતિ લાવે.

સંદર્ભપુસ્તકો:

1. કૃષિ વિસ્તરણ શિક્ષણ – ઈશ્વરભાઈ પટેલ
2. કૃષિ યાંત્રિકરણ ની માર્ગદર્શિકા – ખેતી નિયામકની કચેરી કૃષિભવન - ગાંધીનગર
3. જિલ્લા ગ્રામ વિકાસ એજન્સી માર્ગદર્શિકા – જિ.ગ્રા.વિ. એજન્સી
4. ભારતમાં ગ્રામ વિકાસ - બાબુભાઈ અવરાણી
5. પંચવર્ષીય યોજનાનો અહેવાલ – સરકારી પ્રકાશનો.

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		Rural Economics -2	2	30	70	-	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 Agricultural, 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.

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		Poultry Farming	2	30	70	-	2.5 Hrs

Title : Poultry Farming

Objective :

1. To understand the importance of management skills of poultry industries.
2. To learn about cure & management of different age of birds.
3. To understand how to make poultry business profitable
4. To understand the importance of learning system of birds.

Course .:

Unit – 1:	Terminology related to poultry and poultry rearing methods	20%
Unit – 2 :	Incubation, hatching and brooding Types of brooding and care during brooding Types of hatching and care during brooding	20%
Unit – 3 :	Principals of light in poultry farming Care of management of broiler and grower.	20%
Unit – 4 :	Care & management of layer and eggs structure of nutritive value of eggs and wrong belief about eggs	30%
Unit – 5 :	Poultry feeds: types of feeds, ingredients of feeds and important facts for preparation of feeds.	10%

Reference Books:

1. A Text books of animal husbandry
2. A handbook of animal husbandry G.C.Benrjee
3. Poultry production
4. Margha palan- AAIJ
5. Margha palan department of A.H

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		Leadership in extension Education	2	30	70	-	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.

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		Forestry	2	30	70	-	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. Ardusi (*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

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		Computer Application	2	30	50	20	2.5 Hrs

Title :- Computer Application

Objectives :-

1. Increase Awareness of students for fundamental knowledge of computer
2. Student depth knowledge of basics of computer that will helpful in future in various fields

Unit-1 Introduction of Computer 20%

- 1.1 definitions
- 1.2 History of computer
- 1.3 Characteristics of computer
- 1.4 Use of computers in various fields

Unit-2 Components of computer system 20%

- 2.1 central Processing Unit (C.P.U)
- 2.2 input devices
- 2.3 output devices

Unit -3 Types of computer and software 20%

- 3.1 analog computer
- 3.2 digital computer and its classification
- 3.3 software
- 3.4 introduction of MS Office, MS Word, PowerPoint

Unit-4 Internet 20%

- 4.1 what is internet
- 4.2 use of Internet in various fields
- 4.3 WWW
- 4.4 Email
- 4.5 internet banking

Unit-5 Computer 20%

- 5.1 what is viruses?
- 5.2 types of virus
- 5.3 how virus get into computer system
- 5.4 preventive measures of computer viruses
- 5.5 antivirus software.

Reference Books :

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

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		Floriculture	2	30	70	-	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

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		Personality Development	2	30	70	-	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%

- 3.2 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

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		Study of Greats	2	30	70	-	2.5 Hrs

Title :- Study of Greats

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

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		English	2	30	70	-	2.5 Hrs

Subject:- English

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		Economics Co-operation	2	30	70	-	2.5 Hrs

Title: Economics of Co-operation

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 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. Calver

**THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR
SEMESTER-III**

SR NO	Course Code	Course Category	c	IM	EM	TM	Course Title
1		Foundation-3	2	30	70	100	Scientific and technical Writing
2		Core-3	2	30	70	100	1.Agronomy-3
			2	30	70	100	2.Horticulture & Forestry-
			2	30	70	100	3.Animal Husbandry-3
			2	30	70	100	4.Rural Extension-3
			2	30	70	100	5.Rural Economics-3
3		Elective-7	2	30	70	100	1.Environmental Economics
			2	30	70	100	2.Crop Disease and Weed Control
			2	30	70	100	3.Rural Extension
4		Elective-8	2	30	70	100	1.Principles of Social Reconstruction
			2	30	70	100	2.Disaster Management
			2	30	70	100	3.Social Engineering
5		Elective-9	2	30	70	100	1.Research Methodology
			2	30	70	100	2.Rural Marketing management
			2	30	70	100	3.N.G.O. Management

Faculty of Rural Studies

Title: - Scientific and technical Writing

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	Foundation-3		Scientific and technical Writing	2	30	70	-	2.5 Hrs

Objective:

1. To study and use the scientific and technical methods of writing.
2. To study methods of thesis writing and references 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 **20%**
 Details Methodology of thesis writing

Unit: 2 References citations: **20%**
 Method used for reference citation

Unit: 3 Research proposal: **20%**
 its importance and methods of research paper writing

Unit: 4 Research and types of research: **20%**
 Discovery and its type

Unit: 5 Proof Reading Signs: **20%**

Different signs used to indicate the correction in the paragraph and in the borders and survey research method

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		Agronomy-3	2	30	70	-	2.5 Hrs

Title: Technique for higher crop production
Objective:

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

Theory:

1. Soil conservation
 Introduction
 Types of soil erosion
 problems & remedies
2. Soil fertility
 Introduction
 Factor affecting soil fertility
 Management of soil fertility
3. Soil reclamation
 Introduction
 Types of problematic soil
 Types and characteristics of saline soil
 Reclamation of saline soil

4. Tillage
 - Introduction
 - Objectives of tillage
 - Types of tillage
 - Merits and demerits of tillage
5. Micro irrigation
 - Concept of sprinkler irrigation
 - Concept of drip irrigation

Reference:

1. Jamin vigyan ane vyavstha (Guj edi) - Babubhai avrani
2. Jamin vigyan ane pak utpadan (Guj edi) - Dr.A.S. Patel & Dr R.S. Joshi
3. Water resource and management - Anil k. Popat
4. Manures and fertilizer - R.S. Yawalkar & J.P. Agrawal and S.Bokde

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		Horticulture & Forestry-3	2	30	70	-	2.5 Hrs

Title : Forestry 3

Unit: 1 Social Forestry

20%

1. Definition
2. Importance of Social Forestry
3. Different Schemes of Social Forestry

Unit 2: Apiculture (Honey Bee Keeping)

20%

1. Importance
2. Types of bee
3. Structure of comb
4. Method of honeybee rearing
5. centers of bee rearing

Unit: 3 Seed Collection

20%

1. Selection of trees
2. Year for seed collection
3. Method of seed collection
4. Seed Treatment
- 5.

Unit: 4 Root Trainer Nursery And Clone Multiplication**20%**

1. Greening India Central Government scheme

Unit: 5 Brief Information**20%**

1. Important Days
2. Centuries Of Gujarat
3. Abhiyaran Of Gujarat
4. Awards Of central Govt.
5. Awards of Gujarat Govt.

References:

1. forest in India- V.P. Agrawal
2. Forestry In India - A.P.Dwivedi
3. A Textbook Of Silviculture-A.P.Dwivedi

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		Animal Husbandry-3	2	30	70	-	2.5 Hrs

Title: Dairy Industry**Objective:**

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 village for preservation of milk and milk products.

Course:

1. Importance of dairy industry 10%
2. Milk Production in the world: An overview
Milk consumption & availability per capita 15%
3. Milk types and their specifications 10%
4. Sources of Contamination of milk and control measures. 10%
5. Milk testing: society level and dairy level 15%
6. Storage of milk: method and advantages: Heating, chilling and by adding preservatives 10%
7. Diseases transmitted through milk and their preventive measures 15%
8. Adulteration in milk and its test: Adulterants used and their testing methods. 15%

Reference Books:

1. Dairy vigyan -C.H. Joshi
2. Dudh ane dudh ni banavto -B.M. Patel
3. Text book of Dairy Science - Henney Judkin
4. Dairying in india - Areview - D.N.Kharady
5. Dairy Microbiology - K.C.Mahanta

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		Rural Extension-3	2	30	70	-	2.5 Hrs

શિર્ષક : સામુદાયિક વિકાસ

હેતુઓ:

૧. સામુદાયિક વિકાસ યોજનાના હેતુઓ અને કાર્યક્રમોની માહિતી માટે
૨. સામુદાયિક વિકાસ કાર્યક્રમોની ગ્રામીણ સમાજ પરની અસરો જાણવી.
૩. ગ્રામીણ અર્થવ્યવસ્થા ઉપર અસર કરતા પરિબળો જાણવા અને ગ્રામીણ અર્થ વ્યવસ્થામાં આવેલ પરિવર્તનો જાણવા.
૪. સામુદાયિક વિકાસ યોજનાનું વહિવટી માળખું સમજવું.

અભ્યાસક્રમના મુદ્દા:

૧. સામુદાયિક વિકાસ યોજનાનો અર્થ અને હેતુઓ
૨. સામુદાયિક વિકાસ માટેના કાર્યક્રમો અને તેની ગ્રામીણ સમુદાય પર અસરો.
૩. સામુદાયિક વિકાસ યોજનાના અમલીકરણ માટે નું વહિવટી માળખું.
૪. ગ્રામીણ અર્થવ્યવસ્થામાં પરિવર્તન લાવનારા પરિબળો તથા આવેલા પરિવર્તનો.
૫. ગ્રામીણ અર્થવ્યવસ્થા ઉપર બ્રીટીશ શાસનની અસરો.

સિધ્ધીઓ

૧. સામુદાયિક વિકાસ યોજનાના કાર્યક્રમોમાં જોડાશે.
૨. સામુદાયિક વિકાસ માટે વહિવટી તંત્રમાં જોડાશે.
૩. ગ્રામીણ અર્થવ્યવસ્થામાં પરિવર્તન લાવવામાં પોતાનો ફાળો આપશે.

સંદર્ભ પુસ્તકો

૧. ગ્રામીણ સમાજશાસ્ત્ર - એ.જી.શાહ
૨. કૃષિ વિસ્તરણ શિક્ષણ - ઈશ્વરભાઈ પટેલ.
૩. વિસ્તરણ શિક્ષણના મુળ તત્વો. - ધીરજ ધકાન
૪. કૃષિ અર્થશાસ્ત્ર - મહેશ જોષી.
૫. ભારતમાં ગ્રામ વિકાસ - બાબુભાઈ અવરાણી
૬. સામુદાયિક વિકાસ અને કૃષિ વિસ્તરણ - બાબુભાઈ અવરાણી.

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		Rural Economics-3	2	30	70	-	2.5 Hrs

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		Environmental Economics	2	30	70	-	2.5 Hrs

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		Crop Disease and Weed Control	2	30	70	-	2.5 Hrs

Title: Crop Disease and weed control

Objective:

1. To aware the students about plant diseases
2. To introduce the students about 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 SPNF use in disease control **20%**

Unit: 5 Weed and weed control

Definition and classification of weed

De-merits of weed

Uses of weed

Dispersal of weed

References:

1. Plant Disease (6th edition) - R.S.Singh
2. Disease of crop plant in India - G.Rangaswami
3. Principles and procedure of plant protection (3rd Edition) - S.B.Chattopadhyay
4. Introduction to principles of plant pathology(3rd Edition) - R.S.Singh
5. Samurna pak Sanraksan Part-II (Gujarati Edition) - Babubhai Avarani
6. SPNF Book - Subhas palekar

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		Rural Extension	2	30	70	-	2.5 Hrs

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		Principles of Social Reconstruction	2	30	70	-	2.5 Hrs

હેતુઓ:

- વિદ્યાર્થીઓ સમાજ નિર્માણથી પરીચીત બને
- વિદ્યાર્થીઓ સમાજ નિર્માણના સહાયક પરીબળને સમજે.
- સમાજના આર્થિક અને હાર્દને સમજે.

અભ્યાસક્રમના મુદ્દા

૧. સમાજ સુધારણાના વિવિધ આંદોલનો

૨૦%

- બ્રહ્મો સમાજ -સ્થાપના, વિકાસ , રાજા રામમોહનરાય
- આર્ય સમાજ - સ્થાપના વિકાસ, દયાનંદ સરસ્વતી
- પ્રાર્થના સમાજ - સ્થાપના વિકાસ, કેશવચંદ્ર સેન.
- થિયોસોફીકલ સોસાયટી, સ્થાપના વિકાસ, મેડમ બ્લેવસકી.

૨. અગ્રગણ્ય રાષ્ટ્રીય નેતાઓ.૧૮૮૫ થી ૧૯૨૦

૨૦%

- દાદાભાઈ નવરોજી.- જીવન પ્રવૃત્તિઓ
- ગોખલે - જીવન પ્રવૃત્તિઓ
- તિલક - જીવન પ્રવૃત્તિઓ
- લાલા લજપતરાય - જીવન પ્રવૃત્તિઓ
- મદના મોહન માલવિયા - જીવન પ્રવૃત્તિઓ

૩. ૨૦ મી સદીનું વિશ્વ

૨૦%

- ૧૯મી સદીનો વારસો.
- ૧૯મી સદીનો રાષ્ટ્રવાદ.
- ૧૯મી સદીનો સામ્રાજ્યવાદ.

૪. વિશ્વ ઇતિહાસના સાંપ્રત પ્રવાહો.

- દ્વિતીય વિશ્વયુદ્ધ વૈશ્વીકરણ સુધી
- ઇંડા યુદ્ધની સ્થિતિ ૧૯૪૬ થી ૫૬ પ્રથમ તબક્કો
- બીજો તબક્કો.- ઇંડા યુદ્ધમાં મંદતા- ૧૯૫૩ થી ૧૯૮૦
- લશ્કરી કરારો અને સંગઠનો. - નાટોમાં પરીવર્તન, બગદાદ કરાર, અગ્ની એશિયાના કરાર સંસ્થા.

૫. બિન જોડાણવાદિ આંદોલન.

૨૦%

- પુર્વભૂમિકા - ત્રીજુ વિશ્વયુદ્ધ.
- બિન જોડાણવાદનો અર્થ, સ્વરૂપ, ત્રીજા વિશ્વનુ સ્વરૂપ.
- સોવિયેટનુ વિઘટન, મિખાઇલગોર્બોચેવનો સત્તાકાળ ,ઇ.સ. ૧૯૮૫ થી ૧૯૯૧
- ૨૦મી સદીમાં વિજ્ઞાન, ટેકનોલોજી અને સંચાર માહિતીનો પ્રસાર,

સંદર્ભગ્રંથો.

- (૧) આધુનિક ભારતનો ઇતિહાસ અને ભારતના સ્વાતંત્ર્ય સંગ્રામો - આર. કે. ધાર્યા.
- (૨). ૨૦મી સદીનુ વિશ્વ. - દેવેન્દ્ર ભટ્ટ.
- (૩) આધુનિક રાજકીય વિચારધારા - જયંતિ કે પટેલ
- (૪) આધુનિક ભરત કા ઇતિહાસ એક નવિન મુલ્યાંકન - ઇ.૧૭૦૭ સે વર્તમાન તક - ગ્રોવર યશપલ ૨૦૦૫
- (૫) ગાંધીજી નુ શિક્ષણ દર્શન - મ. જો. પટેલ
- (૬) ગાંધી જીવન મહાન - રાજેન્દ્ર દવે
- (૭) બાપુની જાંખિ - કાકા સાહેબ કાલેલકર
- (૮) મારા સપ્નાનુ ભારત - ગાંધીજી

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		Disaster Management	2	30	70	-	2.5 Hrs

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		Social Engineering	2	30	70	-	2.5 Hrs

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		Research Methodology	2	30	70	-	2.5 Hrs

હેતુઓ:

- સંસોધનની ટેકનીક નો ઉપયોગ કરીને વિધાર્થીઓ મા વૈધાનિક વલણ વિકસાવવું
- સામાજિક ક્ષેત્રે સંસાધનનું સ્થાન અને મહત્વ જાણવું

સિધ્ધિઓ :

- વિધાર્થીઓ મા વૈગ્નાનિક ઢબે સંશોધન કાર્ય અંગે ની જાણકારી વધે.
- સામાજિક સર્વે પ્રકાર ના અભ્યાસો માં નિપુણતા કેળવાય
- સંશોધન અહેવાલ લેખન અને માહિતની રજૂઆત વિષે જાણકારી વધે.

એકમ -૧ સામાજિક સર્વેક્ષણ (Social Survey)

- ૧.૧ સામાજિક સર્વેક્ષણ નો અર્થ
- ૧.૨ સામાજિક સર્વેક્ષણ ના લક્ષણો
- ૧.૩ સામાજિક સર્વેક્ષણ ના હેતુઓ
- ૧.૪ સામાજિક સર્વેક્ષણ અને સંશોધન વચ્ચે તાફાવત

એકમ -૨ પૂર્ણ ગણતરી અને નિદર્શન

- ૨.૧ પૂર્ણ ગણતરી એટલે શું ?
- ૨.૨ પૂર્ણ ગણતરી મર્યાદાઓ
- ૨.૩ સમષ્ટી નો અર્થ અને પ્રકાર
- ૨.૪ નિદર્શ એટલે શું?
- ૨.૫ સારા નિદર્શન ની લાક્ષણિકતાઓ
- ૨.૬ નિદર્શન ની જરૂરિયાત અને ઉપયોગિતા
- ૨.૭ નિદર્શન ના પ્રકાર
- ૨.૮ યદ્યદ્ય નિદર્શ મેળવવાની પ્રયુક્તિઓ

એકમ-૩ માહિતી ના પ્રાથમિક અને ગૌણ સ્ત્રોત

- ૩.૧ માહિતી એટલે શું ?
- ૩.૨ ગૌણ માહિતી એટલે શું ?
- ૩.૩ ગૌણ માહિતી સ્ત્રોતો
- ૩.૪ દસ્તાવેજી સ્ત્રોતો નું મહત્વ અને મર્યાદાઓ
- ૩.૫ પ્રાથમિક માહિતી નો અર્થ
- ૩.૬ પ્રાથમિક માહિતી ના સ્ત્રોતો - ક્ષેત્રીય સ્ત્રોતો એટલે શું ?
- ૩.૭ ક્ષેત્રીય સ્ત્રોતો નું મહત્વ અને મર્યાદાઓ

એકમ-૪ સંશોધનમાં માહિતી એકત્ર કરવાની પદ્ધતિઓ

- ૪.૧ નિરીક્ષણ પદ્ધતિ
- ૪.૧.૧ નિરીક્ષણ નો અર્થ, લક્ષણો.
- ૪.૧.૨ નિરીક્ષણ પદ્ધતિની ઉપયોગિતા અને મર્યાદા
- ૪.૧.૩ નિરીક્ષણ ના પ્રકાર
- ૪.૨ પ્રશ્નાવલિ પદ્ધતિ
- ૪.૨.૧ પ્રશ્નાવલિ એટલે શું ? પ્રશ્નાવલિ ના લક્ષણો
- ૪.૨.૨ પ્રશ્નાવલિ ની ઉપયોગિતા
- ૪.૨.૩ પ્રશ્નાવલિ ની મર્યાદા
- ૪.૨.૪ પ્રશ્નાવલિ ના પ્રકાર
- ૪.૨.૫ પ્રશ્નાવલિ ઘડતર માટેના માર્ગદર્શક સિધ્ધાંતો
- ૪.૩ મુલાકાત પદ્ધતિ
- ૪.૩.૧ મુલાકાતનો અર્થ અને લાક્ષણિકતાઓ
- ૪.૩.૨ મુલાકાત અનુસૂચિ
- ૪.૩.૩ મુલાકાત અનુસૂચિ અને પ્રશ્નાવલિ વચ્ચે સામ્યાતા અને તફાવત
- ૪.૩.૪ મુલાકાત ના પ્રકારો
- ૪.૩.૫ મુલાકાત ની ઉપયોગિતા અને મર્યાદાઓ

એકમ-૫ માહિતીની રજુઆત અને સંશોધન અહેવાલ લેખન

- ૫.૧. મહિતીની રજુઆત(કોષ્ટકો દ્વારા)
- ૫.૧.૧ કોષ્ટક નો અર્થ
- ૫.૧.૨ કોષ્ટક ના પ્રકાર
- ૫.૧.૩ કોષ્ટક ના વિવિધ ભાગો
- ૫.૧.૪ કોષ્ટકીકરણ નું મહત્વ
- ૫.૨ મહિતી ની રજુઆત (આલેખો દ્વારા)

- પા.૨.૧ આલેખ એટલે શુ ?
પા.૨.૨ વિવિધ પ્રકાર ના આલેખો નો અભ્યાસ
પા.૩ સંશોધન અહેવાલ લેખન
પા.૩.૧ સંશોધન અહેવાલ નો વાચક વર્ગ
પા.૩.૨ સંશોધન અહેવાલ ની લેખન શૈલી
પા.૩.૩ અહેવાલ લેખનમાં લેખકે ધ્યાન મા રાખવાની બાબતો
પા.૩.૪ સંશોધન અહેવાલના તબક્કાઓ
પા.૩.૫ સંશોધન લેખ એટલે શુ ?
પા.૩.૬ સારાંશ અહેવાલ એટલે શુ ?

સંદર્ભ ગ્રંથો :

૧. સામાજિક સંશોધન પદ્ધતિઓ - ડો. અરવિંદ દેસાઈ
૨. સંશોધન પદ્ધતિઓ - ડો. દેવે
૩. સમાજ શાસ્ત્રની સંશોધન પદ્ધતિઓ- પ્રો. એ.જી.શાહ
૪. સંશોધન પ્રણાલી - ડો. વિજય હરારે
૫. સંશોધન ડિઝાઈન - ડો. વિમલ શાહ
૬. સંશોધન અહેવાલ - ડો. વિમલ શાહ
૭. સંશોધન પદ્ધતિઓ અને પ્રવિધિઓ - ડો હરિભાઈ દેસાઈ

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		Rural Marketing management	2	30	70	-	2.5 Hrs

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		N.G.O. Management	2	30	70	-	2.5 Hrs

**THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR
SEMESTER-IV**

SR NO	Course Code	Course Category	c	IM	EM	TM	Course Title
1		Foundation-4	2	30	70	100	Rural Industrization
2		Core-4	2	30	70	100	1.Agronomy-4
			2	30	70	100	2.Horticulture & Forestry-4
			2	30	70	100	3.Animal Husbandry-4
			2	30	70	100	4.Rural Extension-4
			2	30	70	100	5.Rural Economics-4
3		Elective-10	2	30	70	100	1.Value Addition in Agriculture Produce
			2	30	70	100	2.Theories of Economic Development
			2	30	70	100	3.Animal Care and Handling
4		Elective-11	2	30	70	100	1.Gandhian Approach to rural Development
			2	30	70	100	2.Agri. Business Management
			2	30	70	100	3.Managerial Economics
5		Elective-12	2	30	70	100	1.Biotechnology in Plants and Animals
			2	30	70	100	2.Integrated Insect Management
			2	30	70	100	3.Agriculture Processing And Marketing

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		Rural Industrization	2	30	70	-	2.5 Hrs

Title: Rural Industrization

Objective:

1. To Understand about importance of rural industrialization
2. To Familiarize with government policy of rural industry
3. To Understand the Gandhian through of rural development
4. To know the problems and remedial majors of rural industrialization

Theory:

Unit: 1 **20%**

Meaning Importance and objectives of rural industrialization, importance of agriculture in rural industrialization

Unit: 2 **20%**

Small and rural industries- meaning importance, benefits, problems and measures

Unit: 3 **20%**

Gandhian approach about rural industries and rural development

Unit: 4 **20%**

Government policy about small and rural industries, small sector industrial policy

Unit: 5 **20%**

Dimensions of the problem of industrial sickness-factors responsible for industrial sickness in small and medium enterprises

Reference:

1. Ruddar Datt and K.P.M. Sundaram- Indian Economics- S.Chand & co.
2. C.M. Chaudhary- Rural Economics - Subline Publications Jaypur
3. A.N. Agrawal, Khandanlal -Agri. Problems Of India Vikash Publishing House Pvt.Ltd
4. Vasant Deshai -Fundamental of rural Development
5. Shree shreemannnarayangi - Relevance of Gandhian economics
6. Bhagvati J & P Deshai - Indial Planning for Industrization
7. ભારત નુ કૃષિ ક્ષેત્ર- વિકાસ એક પડકાર- ડૉ. ભાષ્કર જોષી - યુનિ ગ્રંથ નિ. બોર્ડ

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		Agronomy-4	2	30	70	-	2.5 Hrs

Title: Project work and dissertation/ Thesis

Objective:

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 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 five 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/THE SIS	TOTAL
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

Name of Course	Seme ster	Core/ Elective/ Foundation	Course Code	Course Title	Cre dits	Inte rnal mar ks	Exte rnal mar ks	Pract ical/ viva mark s	External exam time duration
M.R.S.	IV	Core-4		Horticulture & Forestry-4	2	30	70	-	2.5 Hrs

Title: Project work and dissertation/ Thesis

Objective:

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 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 five 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/THE SIS	TOTAL
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

Name of Course	Seme ster	Core/ Elective/ Foundation	Course Code	Course Title	Cre dits	Inte rnal mar ks	Exte rnal mar ks	Pract ical/ viva mark s	External exam time duration
M.R.S.	IV	Core-4		Animal Husbandry-4	2	30	70	-	2.5 Hrs

Title: Project work and dissertation/ Thesis

Objective:

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 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 five 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/THE SIS	TOTAL
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

Name of Course	Seme ster	Core/ Elective/ Foundation	Course Code	Course Title	Cre dits	Inte rnal mar ks	Exte rnal mar ks	Pract ical/ viva mark s	External exam time duration
M.R.S.	IV	Core-4		Rural Extension-4	2	30	70	-	2.5 Hrs

Title: Project work and dissertation/ Thesis

Objective:

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 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 five students maximally
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Distribution of marks

1. Internal assessment

Internal assessment shall include following three criteria to evaluate a student

1. Identification and selection of a problem for project work and preparation of project proposal **10 marks**
 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/THE SIS	TOTAL
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

Name of Course	Seme ster	Core/ Elective/ Foundation	Course Code	Course Title	Cre dits	Inte rnal mar ks	Exte rnal mar ks	Pract ical/ viva mark s	External exam time duration
M.R.S.	IV	Core-4		Rural Economics-4	2	30	70	-	2.5 Hrs

Title: Project work and dissertation/ Thesis

Objective:

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 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 five 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/THE SIS	TOTAL
Member-1 (Course Teacher)	20	15	35
Member-2 (Subject Expert)	20	15	35

Name of Course	Seme ster	Core/ Elective/ Foundation	Course Code	Course Title	Cre dits	Inte rnal mar ks	Exte rnal mar ks	Pract ical/ viva mark s	External exam time duration
M.R.S.	IV	Elective-10		1.Value Addition in Agriculture Produce	2	30	70	-	2.5 Hrs

હેતુઓ:-

૧. કૃષિ પાકોનાં ઉત્પાદનમાં મુલ્યવૃદ્ધિનો અર્થ,ફાયદા,પદ્ધતિ જાણે
૨. કૃષિ બાગાયત વ્યવસાય ઉપરાંત મુલ્યવૃદ્ધિનો વ્યવસાય જાણવો.
૩. પાક ઉત્પાદન પછીની માવજતો જાણે
૪. વિવિધ બનાવટોની પદ્ધતિ જાણે

અભ્યાસક્રમનાં મુદ્દા:-

૧. મુલ્ય વૃદ્ધિનો અર્થ, વ્યાખ્યાઓ, મુલ્ય વૃદ્ધિનું મહત્વ, મુલ્યવૃદ્ધિ ઉપર અસર કરતાં પરિબળો અને મુલ્ય વૃદ્ધિની રીતો
૨. ફળો પાકવાનાં લક્ષણો અને કાપણીની પદ્ધતિ
૩. અનાજ,કઠોળ,તેલીબીયાં,શાકભાજી, ફળો પુષ્પ ઉતાર્યા પછીની માવજતો.
૪. ફળ-ફુલ,શાકભાજી બગડવાનાં કારણો,અનાજ,કઠોળ,તેલીબીયાં બગડવાનાં કારણો, પરિરક્ષણનું મહત્વ,પરિરક્ષણનાં સિધ્ધાંતો, પરિરક્ષણમાં વિવિધ રસાયણોનાં ઉપયોગ,પરિરક્ષણની પદ્ધતિઓ.
૫. કૃષિ પેદાશોની વિવિધ બનાવટો.
અનાજ-લાંટ,બ્રેડ,
કઠોળ- દાળ,
તેલીબીયાં-તેલ-ખોળ
ફળો-જામ,જેલી સરબતો,ડબાબંધી,મુરબ્બા,છુંદા,માર્મલેડ
શાકભાજી-અથાણા,ચટણી,સોસ/કેચપ,સુપ,સુકવણી
ફુલો-વેણી,ગજરા,હાર,કટ ફલાવર્સ,શણગાર,એસન્સ

સિધ્ધિઓ:-

૧. પોતાનાં ઘરમાં વિવિધ બનાવટો બનાવવી અને વેચવી.
૨. કેનીગ ઈન્ડસ્ટ્રીમાં જોડાશે.
૩. સ્વરોજગારીની તકો ઉભી કરી સ્વાલંબી થશે.

સંદર્ભ પુસ્તકો:-

૧. ફળ અને શાકભાજી પરિરક્ષણ-માર્ગદર્શિકા-બાગાયત ખાતું,ગુજરાત રાજ્ય-ગાંધીનગર
૨. ફળ અને શાકભાજી પરિરક્ષણ,વિવિધ બનાવટો અને વાનગીઓની માર્ગદર્શક પુસ્તિકા-કોઓપરેટીવ રૂરલ ડેવલપમેન્ટ ટ્રસ્ટ, ઈફકો,કલોલ અને IRDP-ઈફકો-કલોલનાં સૌજન્ય થી
૩. ફળ વિશેષાંક -કૃષિગોદિા-આણંદ કૃષિ યુનિવર્સિટી-
૪. શાકભાજી વિશેષાંક- કૃષિગોદિા-આણંદ કૃષિ યુનિવર્સિટી-
૫. ફુલ વિશેષાંક -કૃષિગોદિા-આણંદ કૃષિ યુનિવર્સિટી-

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		Theories of Economic Development	2	30	70	-	2.5 Hrs

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		Animal Care and Handling	2	30	70	-	2.5 Hrs

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		Gandhian Approach to rural Development	2	30	70	-	2.5 Hrs

હેતુ:-

૧. વિદ્યાર્થીઓ ગાંધીજીને સમગ્રતયા સમજે.
૨. ગાંધીજીની આદર્શો અને વ્યવહારીકતાને સમજે.
૩. ગાંધીજીની કેળવણીથી પરિચીત બને.
૪. ગાંધીજીનું ગ્રામ્ય દર્શન સમજે.
૫. ગાંધીજીનું અર્થ દર્શન સમજે.

અભ્યાસક્રમ:-

એકમ-૧ ગાંધીજીનું ગ્રામ્ય જીવન અવલોકન

- ગ્રામોદ્ધાર માટેનાં ગાંધીજીનાં પ્રયાસો.
- ગ્રામ સેવકનો ધર્મ
- ગામડું અને સ્વછતાનો ખ્યાલ, ગ્રામ સફાઈ
- આરોગ્ય શિક્ષણ

એકમ-૨:- ગાંધીજીનું અર્થ દર્શન:-

- મજુર પ્રવૃત્તિ
- પૂર્ણ રોજગારી
- જાત મહેનત
- આર્થિક સમાનતા દ્વારા ગરીબી નિવારણ, બેકારી નિવારણ

એકમ-૩ :-અર્થ દર્શનનાં વિવિધ પહેલુઓ

- ટ્રસ્ટીશીપ(વાલીપણાં સિધ્ધાંત)
- યંત્રો-યાંત્રીકતા અંગે ગાંધીવિચાર
- પરદેશી કાપડનો બહિષ્કાર,સ્વદેશી ભાવના.
- ખાદી અને અન્ય ગ્રામ ઉદ્યોગ
- ખાદી પ્રચારનાં ઉપાયો

એકમ-૪ગાંધીજીનાં કેળવણી વિષયક વિચારો.

- કેળવણી વિષયક વિચારોનો વિકાસ
- વર્ધા કેળવણી,બુનાયદી તાલીમ,સમવાયી તાલીમ
- ઉદ્યોગ દ્વારા શિક્ષણ-રચનાત્મક કળાનો સમન્વય
- ગુજરાત વિદ્યાપીઠની સ્થાપના
- ચારિત્ય ગઠનની કેળવણી-વિદ્યાર્થીઓમાં

એકમ-૫ સામુદાયીક શિક્ષણનાં પ્રકારો

- પ્રૌઢ શિક્ષણ
- ઉન્નતીનાં પ્રયોગો
- ખેડુતો,મજૂરો,પશુ સુધારણાં
- આદિવાસીઓ,રક્તપીતનાં રોગીઓ

સંદર્ભગ્રંથો:-

૧. ગાંધીજીનો અર્થ દર્શન-વિઠલદાસ મગનલાલ કોઠારી
૨. ગાંધીવાદી જીવન દર્શન અને અર્થ વ્યવસ્થા- રમેશભાઈ બી શાહ
૩. ગાંધીજીનું ધર્મ દર્શન-મ.જો.પટેલ
૪. સમાજ સુધારાણામાં ગાંધીજીનું પ્રદાન-અંજના બી શાહ
૫. ક્રાંતિકારી ગાંધી-રામનારયણ નાગરદાસ પાઠક
૬. રચનાત્મક કાર્યક્રમો-દશરથલાલ શાહ
૭. આધુનિક ભારતનો ઇતિહાસ અને ભારતનાં સ્વતંત્ર સંગ્રામો-ડો.રમણ કે ધારૈયા

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		Agri. Business Management	2	30	70	-	2.5 Hrs

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		Managerial Economics	2	30	70	-	2.5 Hrs

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		Biotechnology in Plants and Animals	2	30	70	-	2.5 Hrs

Title: Biotechnology in Plants and Animals

Objectives:

1. To make students aware of agriculture biotechnology
2. To make students familiar to application of modern techniques of biotechnology

Learn out comes:

1. Help to gather basic information about agricultural bio-technology
2. It is a valuable tools for students

Units: 1 What is biotechnology

20%

- 1.1 Use of biotechnology in crop science
- 1.2 Use of biotechnology in animal growth

Unit: 2 Tissue culture

20%

- 2.1 What is tissue culture ?
- 2.2 Determination of plant development and factors determining plant growth
- 2.3 method of tissue culture

- 1 Shoot tip culture : methods of raising a plant through shoot tip culture
- 2 zygotic embryo culture
- 3 callus culture and cell culture
- 4 protoplast culture
- 5 haploid culture
- 2.4 Use of tissue culture
- 2.5 Advantage and disadvantages of tissue culture

Unit: 3 Genetic engineering in plants and animals **20%**

- 3.1 Genetic engineering in plants - genetically modify crops
 - 3.1.1 BT seeds and BT pesticides
 - 3.1.2 BT transgenic plants
 - 3.1.3 Advantages and disadvantages of BT
- 3.2 What is transgenic animals ?
 - 3.2.1 Role of genetic engineering in animal breeding
 - 3.2.2 Advantage and disadvantages of transgenic animals
 - 3.2.3 Risks related to the transgenic animals

Unit: 4 Test tube baby and cloning **20%**

- 4.1 What is test tube baby?
 - 4.1.1 Step of test tube baby technique
 - 4.1.2 Advantages of test tube baby
- 4.2 What is cloning?
 - 4.2.1 Merit of cloning
 - 4.2.2 Method of cloning "Dolly" the sheep

Unit: 5 Multiple ovulation and embryo transfer (MOET) **20%**

- 5.1 What is multiple ovulations?
- 5.2 What is embryo transfer?
 - 5.2.1 Important historical dates in embryo transfer technique
 - 5.2.2 Merits and demerits of embryo techniques
 - 5.2.3 Steps of embryo transfer techniques

References:

- 1) Bio technology visheshank (Godarshan)
- 2) Veterinary Obstetrics and Genecology - Kodagali
- 3) Agricultural Bio- technology- Probir Kanti Biswas
- 4) Plant breeding-II Edited by Kenneth J Frey

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		Integrated Insect Management	2	30	70	-	2.5 Hrs

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		Agriculture Processing And Marketing	2	30	70	-	2.5 Hrs