SAURASHTRA UNIVERSITY RAJKOT



FACULTY OF RURAL STUDIES (CBCS)

ORDINANCES AND RULES

&

SYLLABUS FOR SEMESTER I & II

FOR

MASTER OF RURAL STUDIES

(Amended rules as on June-2019)

Saurashtra University

University Road, Rajkot - 360005

MASTER OF RURAL STUDIES

VISION:-

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

MISSION:-

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

Ordinances and Regulations:-

O.M.R.S. - 1:

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

- 1. B.R.S. / B. A. (Rural Studies) from this or any other university recognized by the University.
- 2. B.S.W. from the recognized University.
- 3. Graduates from Govt. approved Gram Vidyapeeth.

- 4. Graduates from Gujarat Vidyapeeth Ahmedabad.
- 5. B.A. (Economics / Sociology)
- 6. B. Com.
- 7. B. Sc. (Agriculture)
- 8. B. Sc. (Horticulture)
- 9. B. V. Sc. & A. H.
- 10. Other Graduates equivalent to B.R.S.

Conditions:

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

O. M. R. S. -2

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

- (1) Employer of the said candidate will permit him / her for M.R.S. full time regular course for two consecutive years.
- (2) One who is second class / Grade graduate with 48% of marks or otherwise whose academic achievement is approved as equivalent to graduation by the Saurashtra University.

O. M. R. S. -3

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

O. M. R. S. - 4

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

O. M. R. S. -5

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

O. M. R. S. -6

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

O. M. R. S. -7

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

O. M. R. S. - 8

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

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

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

marks in the internal assessment component of semester III and has cleared all the courses of Semester – I.

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

O. M. R. S. - 10

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

Regulations for Master of Rural Studies

R.M.R.S. – 01 : Internal Assessment

Internal assessment / evaluation will be made as per following:

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

- 1. **Written test** = 10 marks: A test of one hour duration for each course will be conducted during each semester.
- 2. **Assignment / Presentation / Institutional visits** = 10 marks: Each student will have to prepare an assignment or has to present on the topic given by his/he course teacher or has to visit an institution and will be evaluated by the teacher, during each semester.
- 3. **Written Quiz** = 10 marks: During each semester, one quiz test will be conducted, during the respective period of subject only. This quiz test shall objective type of question only.

R.M.R.S. - 02:

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

R.M.R.S. - 03: Course structure:

The syllabus of M. R. S. is divided in to four semesters and is of two years duration.

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 M.D.C. 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.

PANEL	<u>VIVA VOCE</u>	DISSERTATION /			<u>TOTAL</u>
		, -	<u> THESIS</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	С	IM	EM	TM	Course Title
1	19070102010100	M.FND-101	2	30	70	100	Rural Technology
2	19070202010200	M.Core-101	2	30	70	100	1.Agronomy
	19070202010300		2	30	70	100	2. Horticulture & Forestry
	19070202010400		2	30	70	100	3.Animal Husbandry
	19070202010500		2	30	70	100	4.Rural Extension
	19070202010600		2	30	70	100	5. Rural Economics
3	19070302010700	M.MDC-101	2	30	70	100	Water Resource Management
	19070302010800		2	30	70	100	2. Pomology
	19070302010900		2	30	70	100	3. Philosophy and Contents of Extension
4	19070402011000	M.MDC-102	2	30	70	100	1.Concept of social reconstruction
	19070402011100		2	30	70	100	2.Rural development in India
	19070402011200		2	30	70	100	3.Olericulture
5	19070502011300	M.MDC-103	2	30	70	100	Natural Recourses and Management
	19070502011400		2	30	70	100	2.Sociology of Tribal Society
	19070502011500		2	30	70	100	3.Reproduction in Farm Animals

MDC means Multi disciplinary course

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-II

Sr	Course Code	Course	C	IM	EM	TM	Course Title
No		Category					
•							
1	19070102020100	M.FND-202	2	30	70	100	Rural Development
2	19070202020200	M.Core-202	2	30	70	100	1. Agronomy-2
	19070202020300		2	30	70	100	2. Horticulture & Forestry -2
	19070202020400		2	30	70	100	3. Animal Husbandry-2
	19070202020500		2	30	70	100	4. Rural Extension-2
	19070202020600		2	30	70	100	5. Rural Economics-2
3	19070302020700	M.MDC-204	2	30	70	100	1. Poultry Production
	19070302020800		2	30	70	100	2. Leadership in Extension
							Education
	19070302020900		2	30	70	100	3. Forestry
4	19070402021000	M.MDC-205	2	30	70	100	1. Computer application
	19070402021100		2	30	70	100	2. Floriculture
	19070402021200		2	30	70	100	3. Personality Development
5	19070502021300	M.MDC-206	2	30	70	100	1. Study of Greats
	19070502021400		2	30	70	100	2. English
	19070502021500		2	30	70	100	3. Economics of Cooperation

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-III

Sr No	Course Code	Course Category	С	IM	EM	ТМ	Course Title
1	19070102030100	M.FND -303	2	30	70	100	Scientific and Technical Writing
	19070202030200	M.Core-303	2	30	70	100	1. Agronomy-3
	19070202030300		2	30	70	100	2. Horticulture & Forestry -3
2	19070202030400		2	30	70	100	3. Animal Husbandry-3
	19070202030500		2	30	70	100	4. Rural Extension-3
	19070202030600		2	30	70	100	5. Rural Economics-3
	19070302030700	M.MDC-307	2	30	70	100	1. Environmental Economics
	19070302030800		2	30	70	100	2. Crop Disease and Weed
3							Control
	19070302030900		2	30	70	100	3. Rural Extension
	19070402031000	M.MDC-308	2	30	70	100	1. Principals of Social
4							Reconstruction
4	19070402031100		2	30	70	100	2. Disaster Management
	19070402031200		2	30	70	100	3. Social Engineering
	19070502031300	M.MDC309	2	30	70	100	1. Research Methodology
5	19070502031400		2	30	70	100	2. Rural Marketing
)							Management
	19070502031500		2	30	70	100	3. N.G.O. Management

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-IV

Sr.	Course Code	Course	С	IM	EM	TM	Title of the Subject
No		Category					
•							
1	19070102040100	Foundation-4	2	30	70	100	Rural Industrialization
2	19070202040200	Core-404	2	30	70	100	1. Agronomy-4
	19070202040300		2	30	70	100	2. Horticulture & Forestry -4
	19070202040400		2	30	70	100	3. Animal Husbandry-4
	19070202040500		2	30	70	100	4. Rural Extension-4
	19070202040600		2	30	70	100	5. Rural Economics-4
3	19070302040700	M.D.C410	2	30	70	100	1. Value Addition in
							Agriculture produce
	19070302040800		2	30	70	100	2. Theories of Economic
							Development
	19070302040900		2	30	70	100	3. Animal Care and Handling
4	19070402041000	M.D.C411	2	30	70	100	1. Gandhian approach to rural
							development
	19070402041100		2	30	70	100	2. Agri. Business
							Management
	19070402041200		2	30	70	100	3. Managerial Economics
5	19070502041300	M.D.C412	2	30	70	100	1. Biotechnology in Plants
							and Animals
	19070502041400		2	30	70	100	2. Integrated Insect
							Management
	19070502041500		2	30	70	100	3. Agriculture Processing And
							Marketing

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

Credits, Grade, Class 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 or one and half hours of practical work per week.
- 6.2 **Grade** 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 O⁺,O, A, B+, B, C & D. There is a **range of marks** for each Grade.

6.3 **Class** is awarded to each grade and depending on range of the CGPA.

Award of Grade and Class:

CGPA	Grade	Class
$8.5 \le \text{CGPA} \le 10$	O_{+}	First Class with
7 ≤ CGPA < 8.5	0	Distinction
$6 \leq CGPA < 7$	A	First Class
$5.5 \le CGPA < 6$	B^{+}	Higher Second Class
$4.8 \le CGPA < 5.5$	В	Second Class
$4 \leq CGPA < 4.8$	C	Pass Class
CGPA < 4	D	Fail

Semester Grade Point Average (SGPA):

 $SGPA = \underline{\Sigma \text{ (credit x grade point)}}$ total credits

Grade Points:

Marks out of 100	Grade points	Grade	Description
85 -100	8.5 - 10	O_{+}	Outstanding
70 - 84.99	7.0 - 8.49	0	Exellent
60 - 69.99	6.0 - 6.99	A	Very Good
55 - 59.99	5.5 - 5.99	B^{+}	Good
48 - 54.99	4.8 - 5.49	В	Fair
40 - 47.99	4.0 - 4.79	С	Average
30 - 39.99	3.0 - 3.99	D	
20 - 29.99	2.0 - 2.99	Е	Dropped
10 - 19.99	1.0 - 1.99	F	
0 - 9.99	0.0 - 0.99	G	

Equivalent percentage based on SGPA:

Equivalent percentage = $SGPA \times 10$

<u>Cumulative Grade Point Average (CGPA)</u>:

 $CGPA = \{ \underline{SGPA(semester\ II) + SGPA(semester\ III) + SGPA(semester\ III) + SGPA(semester\ IV)} \}$ No. of semester

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

Sr No.	Course Code	Course Category	С	IM	EM	TM	Course Title
1	19070102010100	M.FND-101	2	30	70	100	Rural Technology
2	19070202010200	M.Core-101	2	30	70	100	1.Agronomy
	19070202010300		2	30	70	100	2. Horticulture & Forestry
	19070202010400		2	30	70	100	3.Animal Husbandry
	19070202010500		2	30	70	100	4.Rural Extension
	19070202010600		2	30	70	100	5. Rural Economics
3	19070302010700	M.MDC-101	2	30	70	100	1. Water Resource Management
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	19070502011500		2	30	70	100	3.Reproduction in Farm Animals

MDC means Multi disciplinary course

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.FND-101	19070102010100	Rural Technology	2	30	70	1	2.5 Hrs

Title: Rural Technology

Objectives:-

- 1. Student aware with knowledge of resources in rural area
- 2. Student aware with knowledge of farm implements, so can use in his farming practices.
- 3. Student aware with knowledge of green house technology, so can use in his farming practices.

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: importance and use (in brief) 20%
 - 2.1. Tractor
 - 2.2. Spray pump
 - 2.3. Plough
 - 2.4. Hoe & Harrow
 - 2.5. Rotavator
- Unit 3 Green House technology 15%
 - 3.1 Importance & Scope
 - 3.2 Principles of green house
 - 3.3 Types of green house
- 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
- (4) Non conventional Enegy (Gujarati edition)- Anil K. Popat

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.Core -101	19070202010200	Agronomy	2	30	70		2.5 Hrs

Title: Research Design in Agriculture

Objectives:-

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

Theory:-

Unit:-1 Questionnaire: -

15%

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

Unit:-2 Sampling and observations

15%

- 2.1 What is sampling
- 2.2 Importance of sampling
- 2.3 Methods of sampling
- 2.4 observations & its importance
- 2.5 Importance observation taken during experimentation for major field crops
- Unit:-3 Some important definitions used in field experiments design, objectives and types of field experiments, uniformity trial and principles of field experiments. 20%

Unit:-4 Field experimental design: -

40%

- 4.1 Aims and classification of experimental design and uniformity trials
- 4.2 Simple designs of experiments
- 4.3 Paired design of experiment
 - 4.3.1 Completely Randomized Design
 - 4.3.2 Randomized Block Design
 - 4.3.3 Latin Square Design

Unit:-5 Care to be taken during field experiments

10%

References:-

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.Core -101	19070202010300	Horticulture & Forestry	2	30	70		2.5 Hrs

Title: Fruit production

Objectives:-

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

Theory:	<u>:</u>		(100%)
Unit: 1		Defination, importance, scope, and problems of fruits	(10 %)
Unit: 2		Planning of orchard	(20 %)
		-Planning of orchard, selection of plant,	
		- Ideal orchard and planting method	
Unit: 3		After care in fruit crops	(25 %)
	-	Training and pruning in fruit Ferilizer requirement Weed and weed management Treatment of "Bahar"	
Unit: 4		Irrigation methods in orchard	(25%)
Unit: 5		-Varietal characteristic of fruits	,
		- Integrated pest management in fruit crops.	(20%)

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	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	Ι	M.Core -101	19070202010400	Animal Husbandry	2	30	70		2.5 Hrs

Title: Animal Genetics & Breeding

Objectives:

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

Unit-1: Heritability and Selection:

20%

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

Unit-2: Variations and Trait:

20%

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

Unit-3: Animal Selection:

20%

- 1. Animal Selection: Methods, Their merits and demerits
- 2. Selection criteria for breeding bulls at puberty and at adulthood

Unit-4: Fertility and Breeding:

20%

- 1. Fertility affecting breeding efficiency and measures to promote breeding efficiency
- 2. Methods of Breeding and Their merits & demerits

Unit-5:Breeding and Pregnancy Diagnosis:

20%

- 1. Heat Detection and Breeding management for successful conception.
- 2. Pregnancy Diagnosis: Importance and Methods.

Reference Books:

1. Pashumadarog and Prasutivigyan Part - 1, 2, 3

- S. B. Kodagali, B. K. Bhavsar

2. Pashu Samvardhan - R. K. Shukal

3. A Text Book of Animal Husbandry - G. C. Banerjee.

4. Animal Genetics and Breeding - BAIF

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.Core -101	19070202010500	Rural Extension	2	30	70		2.5 Hrs

Title: ગ્રામ વિકાસનો ઈતિહાસ

Objectives:-

- (૧) વ્યક્તિ, જુથ, સમુહ ને તૈયાર કરવા.
- (૨) વિવિધ યોજનાઓથી અવગત કરવા.
- (૩) ગ્રામ વિકાસના બધાજ પરિબળોથી અવગત કરવા.
- (૪) સ્વૈચ્છીક સંસ્થાઓ થી વિદ્યાર્થીઓને જાગ્રત કરવા.

અભ્યાસક્રમ

ગ્રામ વિકાસનો ખ્યાલ ગ્રામ વિકાસના કાર્યો ગ્રામ વિકાસનો ઈતિહાસ, અને ગ્રામ વિકાસના એકમ :- ૧ હેતુઓ. २० % ગ્રામ વિકાસની સંસ્થાઓ (એજન્સીઓ)નો ખ્યાલ, અર્થ અને મહત્વ એકમ :- ૨ २० % ગ્રામ વિકાસમાં NGO નો ફાળો, અર્થ, કાર્યો વિભાવના અને કાર્યક્ષેત્ર. એકમ :- ૩ २० % ગ્રામ વિકાસમાં સહકારીક્ષેત્રે યુવાનો, ખેડૂતો અને મહિલાઓ અને સરકારી બેંકોનું મહત્વ, રોલ એકમ :- ૪ અને કામગીરી. २० % એકમ :- પ ગ્રામ વિકાસ માટેની વિવિધ યોજનાઓ. २० %

૧ સહકારી સંસ્થાઓ.

ર ટ્રાયસેમ યોજના

૩ SGSY યોજના

૪ નારેગા યોજના

પ આદિવાસી વિકાસ યોજના

દ વોટરશેડ યોજના

સદર્ભ ગ્રંથો:-

૧. ભારતની સામાજિક સંસ્થાઓ - પ્રો શાહ / જોષી

૨. ગ્રામ વિકાસ - લે. બાબુભાઈ અવરાણી.

૩. ભારત ગરીબી - લે. રોહિત શુકલા.

૪. કૃષિ અર્થશાસ્ત્ર - સીદત / વ્યવહાર.

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.Core -101	19070202010600	Rural Economics	2	30	70	1	2.5 Hrs

Title: Agriculture Economics.

Objectives:

- 1. To know Basic Issue Of Agriculture Economics.
- 2. To Know About Cropping pattern.
- 3. To Know About Agri. Credit Structure
- 4. To Familiarise Student With Policy issue That are relevant to Indian agri. Ecomics & enable then to analyze the issue.
- UNIT-1 Meaning and characteristics of agriculture economics The place of agriculture in the national economy
 trends of Agriculture production and productivity after 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, importance, progress & limitations irrigation, fertilizers and manures, seeds, soil conservation and reclamation. animal husboudry 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.suorces of credit for Indian farmers – institutional and non-institutional credit, limitations of 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, Mumbay
- 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, Mumbay

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.MDC -101	19070302010700	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: 100%

Unit: 1 Introduction to water Resource Management.

25 %

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

Unit: 2 Ground Water

25 %

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

Unit: 3 Watershed Management

15 %

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

Unit: 4 Water harvesting.

15 %

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

Unit: 5 Advance Water Application Method

20 %

- 5.1 Function of irrigation water.
- 5.2 Sprinkler irrigation system

Classification of irrigation system

Advantages of irrigation system

Disadvantages of irrigation system

5.3 Drip irrigation system.

Part of Drip irrigation system.

Advantages of drip irrigation system.

Disadvantages of drip irrigation system.

5.4 Visit to a farm and practical.

Study of drip irrigation.

5.5 Collect the information related to motivation of drip irrigation system about Government policy.

References:-

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.MDC -101	19070302010800	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.

<u>Theory: -</u> (100%)

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

Unit: 2 Planning of orchard (20 %)

-Planning of orchard, selection of plant,

- Ideal orchard and planting method

Unit: 3 After care in fruit crops (25 %)

- Training and pruning in fruit
- Ferilizer requirement
- Weed and weed management
- Treatment of "Bahar"

Unit: 4 importance of watering in fruit crops & Irrigation methods in orchard

(25%)

Unit: 5 Varietal characteristic of fruits & Integrated pest management in fruit crops.

(20%)

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	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.MDC -101	19070302010900	Philosophy & contents of extension	2	30	70		2.5 Hrs

Title: Philosophy and Contents of Extension

Objectives:-

- (૧)વિદ્યાર્થીઓ વિસ્તરણ શિક્ષણની મહત્વની બાબતો વિશે જાણે.
- (૨)વિદ્યાર્થીઓ વિસ્તરણ શિક્ષણનો ઈતિહાસ 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: २० % ૧.વિસ્તરણ શિક્ષણના તત્વો. ૨. વિસ્તરણ શિક્ષણનું મહત્વ. ૩. વિસ્તરણ શિક્ષણનું કાર્યક્ષેત્ર. વિસ્તરણ શિક્ષણના સિધ્ધાંતોઃ એકમ :- ૨ २० % ૧.વિસ્તરણ શિક્ષણનો ઈતિહાસ. ૨. વિસ્તરણ શિક્ષણ પ્રક્રિયાના સોપાન. ૩. વિસ્તરણ શિક્ષણનું તત્વજ્ઞાન. એકમ :- ૩ પરદેશમાં વિસ્તરણ શિક્ષણ સેવાઓ : २० % ૧.અમેરીકા ૨. ફિલીપાઈન્સ. ૩. જાપાન ૪. બર્મા એકમ :- ૪ ભારતીય ગ્રામીણ સમાજ २० % ૧. ભારતય ગ્રામરચના. ૨. ગ્રામ વ્યવસ્થાના પ્રકાર. ૩. જ્ઞાતિપ્રથા. ૪. ગ્રામ સમાજના લક્ષણો.

એકમ :- પ સામુદાયિક વિકાસ કાર્યકરનું કર્તવ્ય :

२०%

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 ધકાન

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.MDC -102	19070402011000	Concept of social reconstruction	2	30	70		2.5 Hrs

Title: Concept of Social Reconstruction

Objectives:-

- (૧)વિદ્યાર્થીઓ સમાજનવનિર્માણ વિશેનું જ્ઞાન પ્રાપ્ત કરે.
- (૨)વિદ્યાર્થીઓ ધર્મ, તત્વજ્ઞાન અને વિજ્ઞાનની સમજ કેળવે.
- (૩)વિદ્યાર્થીઓ ફ્રેચ અને અમેરીકન ક્રાંતિથી પરીચિત થાય.
- (૪) વિદ્યાર્થીઓ કાલમાર્કસ, અબ્રાહમ લીંકન અને માર્ટીન લ્યુથરિકિંગ વિશેનું જ્ઞાન પ્રાપ્ત કરે.

અભ્યાસક્રમ

સમાજનવનિર્માણ એટલે શું? તે શા માટે જરૂરી છે ? સમાજનવનિર્માણનું સ્વરૂપ અને ક્ષેત્ર એકમ :- ૧ 90% એકમ :- ૨ સમાજનવનિર્માણના સહાયક પરિબળોમાં ૨૫% ૧.ધર્મ - ધર્મ એટલે શું તેના ઉદભવના કારણો. માનવ જીવનમાં ધર્મનું મહત્વ ૨. તત્વજ્ઞાન - તત્વજ્ઞાનની વ્યાખ્યા અને લક્ષણો. તત્વજ્ઞાનની જુદી - જુદી શાખાઓ. 3. વિજ્ઞાન - વિજ્ઞાનની વ્યાખ્યા અને લક્ષણો. ર્ફેચ અને અમેરિકન ક્રાંતિ તેના કારણો અને તેની અસરો સમાજ પૂનઃ નિર્માણની એક પ્રક્રિયાના એકમ :- ૩ ભાગરૂપે ક્રાંતિ २० % સત્તા હારા સામાજિક ક્રાંતિ માર્ટિન લ્યુથરકિંગ જુનિયર, જહોન કેલ્વીન. એકમ :- ૪ ૨૫ % સોક્રેટીસનું જીવન અને તેનું ચિંતન

સદર્ભ ગ્રંથો:-

એકમ :- પ

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

પ્લેટોનું જીવન અને તેનું આદર્શ નગર રાજ્ય.

અબ્રાહમ લીકન અને કાલમાર્કસની ઉપયુકતતા અને મૂલ્યાંકન.

२० %

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.MDC -102	19070402011100	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	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.MDC -102	19070402011200	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	Defination, importance, scope, and problems of vegetable growing	20 %
Unit: 2	Importance of Hybrid varieties and seed production in vegetables	20 %
Unit: 3	Seedling and Bordeaux mixture in seedling in vegetables	20%
Unit: 4	Plant growth regulator, Weed and weed management	20 %
Unit: 5	Crop protection & Fertilizer requirement in vegetables.	20%

References

- (1) "Shakbhaji vigyan" (Gujrati edition) Babubhai Avarani.
- (2) "Shakbhaji pako ni kheti " (Gujrati edition dec. -2013) pub.: Directore of extension education, J. A.U., Junagadh.
- (3) "Shakbhaji " (Gujrati edition may-2009) pub.: Directore of extension education, A. A. U., Anand.

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	Ι	M.MDC -103	19070502011300	Natural resources & 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 Cycles which keep the environment in balance.
- 1.3 Manmade and natural environment.

Unit: - 2 Pollution

20%

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

Unit: - 3 Environment & Society

20%

- 3.1 "Eco-Friendly" Approach for conservation and protection of natural resources.
- 3.2 "Chipko Andolan".
- 3.3 Environmental acts: air, water & protection

Unit: - 4 Energy

20%

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

Unit: - **5** Environment Conservation

20%

- 5.1 Soil
- 5.2 Energy
- 5.3 Forest

Reference

Paryavaran sath.
 Environment and seismic engineering
 Paryavaran shastra
 Paryavaran
 Paryavaran
 Dr.M.B Gohil
 Bipinbhai joshi
 Dr.M.B.Gohil

5. Chalo jagiyre paryavaran bachaviye - Dr.Rameshchandra J. Bhayani.

6. Kudarat Sampati vikat andvyavasthapan - Babubhai avarani

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	I	M.MDC -103	19070502011400	Sociology of tribal society	2	30	70	1	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	

Reference:-

- 1. Adivasi Samajnu Samajshashtra- A G Shah and J K Dave
- 2. Gujaratna Adivasio_ Shah Vimal

Unit: - 5 Introduction to Tribes in Gujarat

-Bhil, Dubala, Sidi,

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

20%

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	Ι	M.MDC -103	19070502011500	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.
- (5) To know udder and milk secretion.

Course:

Unit-1 Reproductive System

30%

- Male Reproductive System: Organs
- Female Reproductive System: Organs

Unit- 2 Hormones related to Reproduction.

10%

Unit- 3 Mechanism of Female Reproduction

20%

- Gametogenesis: Oogenesis, Spermatogenesis

Unit- 4 Estrus Cycle and Ovulation

10%

Unit- 5 Mammary Gland and Milk Secretion

30%

- Structure and Functioning of udder.
- Milk Secretion: Factors and Mechanism.

Reference Books:

1. Pashumadarog and 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

THE FOLLOWING ARE THE SUBJECTS PRESCRIBED FOR

SEMESTER-II

Sr	Course Code	Course	C	IM	EM	TM	Course Title
No		Category					
•							
1	19070102020100	M.FND-202	2	30	70	100	Rural Development
2	19070202020200	M.Core-202	2	30	70	100	1. Agronomy-2
	19070202020300		2	30	70	100	2. Horticulture & Forestry -2
	19070202020400		2	30	70	100	3. Animal Husbandry-2
	19070202020500		2	30	70	100	4. Rural Extension-2
	19070202020600		2	30	70	100	5. Rural Economics-2
3	19070302020700	M.MDC-204	2	30	70	100	1. Poultry Production
	19070302020800		2	30	70	100	2. Leadership in Extension
							Education
	19070302020900		2	30	70	100	3. Forestry
4	19070402021000	M.MDC-205	2	30	70	100	1. Computer application
	19070402021100		2	30	70	100	2. Floriculture
	19070402021200		2	30	70	100	3. Personality Development
5	19070502021300	M.MDC-206	2	30	70	100	1. Study of Greats
	19070502021400		2	30	70	100	2. English
	19070502021500		2	30	70	100	3. Economics of Cooperation

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	FND-202	19070102020100	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.
- Characteristics of economic development

Unit: 2 India is a developing country

20 %

- Characteristics of economic growth.
- Determination of requirements of economic growth.
- Characteristics of under developed Economy.

Unit: 3 Community Development Programme

20 %

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

Unit : 4 Sustainable Developments

20 %

- Sustainable Development's meaning and Defination.
- Sustainable Development's indicators.
- Environment conservation in India & sustainable development.

Unit: 5 Programs for Rural Development.

20%

- HYVP
- IADP
- SFDA
- IRDP
- TRYSEM

References:-

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.Core -202	19070202020200	Agronomy	2	30	70		2.5 Hrs

Title: Advance Agronomy

Objectives:-

- 1 To know the Advance technique in Agronomy
- 2 To create self employment.
- 3 To provide knowledge of progressive farming.

Unit: 1 Organic farming.

20%

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

Unit: 2 Hydroponics

20%

- Defination & Meaning
- History of Hydroponics
- Types of Hydroponics
- Merits & demerits.

Unit: 3 Bio - fertilizer

20%

- Defination & 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 Tissue Culture

20%

- Meaning & importance
- Methods of tissue culture

References:-

1. Pragatisil Kheti (Gujarati Edition)

-SSK, JAU- Junagadh

2. Mushroom Cultivation

J.N. Kapoor

3. Hydroponics

-Nagendra Vijay

4. Bacterial Fertilizer

- B.R. Tilak

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.Core -202	19070202020300	Horticulture & Forestry	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: -		100%
Unit: 1	Defination, importance, scope, and problems of vegetable growing	20 %
Unit: 2	Importance of Hybrid varieties and seed production in vegetables	20 %
Unit: 3	Seedling and Bordeaux mixture in seedling in vegetables	20%
Unit: 4	Plant growth regulator, Weed and weed management	20 %
Unit: 5	Crop protection & Ferilizer requirement in vegetables.	20%

References

- (1) "Shakbhaji vigyan" (Gujrati edition) Babubhai Avarani.
- (2) " Shakbhaji pako ni kheti " (Gujrati edition dec. -2013)

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

(3) "Shakbhaji" (Gujrati edition may-2009)

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.Core -202	19070202020400	Animal Husbandry	2	30	70		2.5 Hrs

Title:- Animal Feeds and Nutrition

Objectives:-

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

Theory:		100%
Unit: 1	Composition and classification of feed stuffs :- Roughages : Dry and Succulent.	15 %
Unit: 2	Concentrates :- Energy rich and protein rich :- Energy rich concentrates	15 %
Unit: 3	Protein rich concentrates : Plant, Animal & NPN feed stuffs.	15 %
Unit: 4	Unconventional Livestock feeds in India	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. 35 %
 - Feed supplements and buy pass proteins.

References:-

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.Core -202	19070202020500	Rural extension	2	30	70		2.5 Hrs

Title: Leadership in extension education

Objectives:-

- (૧)વિદ્યાર્થીઓ નેતૃત્વ તેના પ્રકારો અને પધ્ધતિઓથી માહિતગાર બને.
- (૨) વિદ્યાર્થીઓ નેતાની કામ કરવાની ઢબ (રીત)થી માહિતગાર બને.
- (૩) વિદ્યાર્થીઓ નેતૃત્વના કાર્યોથી પરિચિત બને.
- (૪) વિદ્યાર્થીઓ સ્થાનિક નેતા હારા કામ કરવાના ફાયદા, તેનો ઉપયોગ, તેના ગુણો, પસંદગી અને તાલીમ વિશે જાણે
- (૫) વિદ્યાર્થીઓમાં નેતૃત્વના ગુણો વિકશે.

અભ્યાસક્રમ એકમ :- ૧ અર્થ : નેતા અને નેતૃત્વ २० % નેતૃત્વના પ્રકારો નેતૃત્વની પધ્ધતિઓ સત્તામુખી લોકશાહી ₹. અનિયંત્રિત / દોરવણી વગરની 3 નેતાઓની કામ કરવાની ઢબો. એકમ :- ૨ ٩ બળ / સત્તાનો ઉપયોગ વડીલશાહીનો ઉપયોગ અરસ - પરસ મદદનો ઉપયોગ એકમ :- ૩ સમુહ ગત્યાત્મકના સિધ્ધાંતો २० % એકમ :- ૪ નેતૃત્વના કાર્યો २० % પરિસ્થિતીનો ગોઠવણ કરવી. 9

એકમ :- ૫ નેતા

ર

3

२० %

૧ સ્થાનિક નેતાઓ હારા કાર્ય કરવાના ફાયદા.

સમુહના વર્તન ઉપર અંકુશ રાખવો.

- ર સ્થાનિક નેતાઓ દ્વારા કાર્ય કરવામાં લક્ષમાં રાખવાના મુદાઓ.
- ૩ વિસ્તરણ શિક્ષણ પ્રવૃતિમાં સ્થાનિક નેતાઓ ઉપયોગ
- ૪ નેતાઓની સેવાઓનું અભિજ્ઞાન
- પ નેતાના ગુણો, પસંદગી અને તાલીમ
- દ નેતાઓની તાલીમ શિબીર

સમુહ માટે બોલવું

સદર્ભ ગ્રંથો:-

- ૧. કૃષિ વિસ્તરણ શિક્ષણ ઈશ્વરભાઈ પટેલ
- ર. વિસ્તરણ શિક્ષણના મુળતત્વો પ્રો. ધીરજ ધકાન

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.Core -202	19070202020600	Rural economics	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 Aria.
- 3. To think about how get easily finance in the Rural Aria.

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

Short term structure – objectives, functions & limitations. Long term structure – objectives, functions & limitations.

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 controls.

20%

20%

References:-

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-204	19070302020700	Poultry production	2	30	70		2.5 Hrs

Title: - Poultry Production

Objective:-

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

Course:

Unit: 1Terminology related to poultry

20%

Poultry rearing

Different methods, merits-demerits

Unit: 2Incubation, hatching and brooding

20%

Types of Hatching, care during hatching

Brooding of chicks and types of brooders

Unit 3 Principles of Light requirement and management of birds

30%

Methods of application,

Care and management of Layer birds and Broiler birds

Unit 4 Eggs:

The structure and nutritive value of eggs

Egg marketing, and wrong beliefs about eggs

Unit 5 Poultry Development Projects

15%

15%

Different government schemes to establish different poultry businesses Institutions engaged in poultry business of the state

Reference:-

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-204	19070302020800	Leadership in extension education	2	30	70		2.5 Hrs

Title: Leadership in extension education

Objectives:-

- (૧)વિદ્યાર્થીઓ નેતૃત્વ તેના પ્રકારો અને પધ્ધતિઓથી માહિતગાર બને.
- (૨) વિદ્યાર્થીઓ નેતાની કામ કરવાની ઢબ (રીત)થી માહિતગાર બને.
- (૩) વિદ્યાર્થીઓ નેતૃત્વના કાર્યોથી પરિચિત બને.
- (૪) વિદ્યાર્થીઓ સ્થાનિક નેતા હારા કામ કરવાના ફાયદા, તેનો ઉપયોગ, તેના ગુણો, પસંદગી અને તાલીમ વિશે જાણે
- (પ) વિદ્યાર્થીઓમાં નેતૃત્વના ગુણો વિકશે.

અભ્યાસક્રમ એકમ :- ૧ અર્થ : નેતા અને નેતૃત્વ २० % નેતૃત્વના પ્રકારો નેતૃત્વની પધ્ધતિઓ સત્તામુખી લોકશાહી ₹. અનિયંત્રિત / દોરવણી વગરની 3 નેતાઓની કામ કરવાની ઢબો. એકમ :- ૨ બળ / સત્તાનો ઉપયોગ વડીલશાહીનો ઉપયોગ ર અરસ - પરસ મદદનો ઉપયોગ

એકમ :- ૩ સમુહ ગત્યાત્મકના સિધ્ધાંતો २० % એકમ :- ૪ નેતૃત્વના કાર્યો

२० % પરિસ્થિતીનો ગોઠવણ કરવી. 9

> સમુહના વર્તન ઉપર અંકુશ રાખવો. ર

સમુહ માટે બોલવું 3

એકમ :- પ નેતા २० %

> 9 સ્થાનિક નેતાઓના ફાયદા.

સ્થાનિક નેતાઓ દ્વારા કાર્ય કરવામાં લક્ષમાં રાખવાના મુદાઓ. ર

વિસ્તરણ પ્રવૃતિમાં સ્થાનિક નેતાઓ ઉપયોગ 3

નેતાઓની કદર 8

નેતાના ગુણો, પસંદગી અને તાલીમ પ

નેતાઓની તાલીમ શિબીર

સદર્ભ ગ્રંથોઃ-

- ૧. કૃષિ વિસ્તરણ શિક્ષણ ઈશ્વરભાઈ પટેલ
- ર. વિસ્તરણ શિક્ષણના મુળતત્વો પ્રો. ધીરજ ધકાન

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-204	19070302020900	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.

<u>Theory: -</u>

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. Centres 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	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-205	19070402021000	Computer application	2	30	70		2.5 Hrs

Title: - Computer Application

Objectives:-

- 1. Students are aware with basic knowledge of computer.
- 2. Students are aware with knowledge of computer application.
- 3. Students are aware with use of computer in his life.

Unit: 1 Introduction to Computer

20%

- Introduction,
- Characteristics
- Functions
- Generations
- Types

Unit: 2 Hardware & Software

20%

- Software
- -Input, Output devises & C.P.U.
- Memory- internal & external
- Software- system software, application software

Unit: 3 MS Office (2007)

30%

- -MS-world facility, screen, Tab.
- -MS-excel- facility, screen, Tab.
- -MS-PowerPoint- facility, screen, Tab.

Unit: 4 Internet

20%

- Introduction, -
- -Use of internet
- E-mail, merits and limitation
- -net -banking
- Social site- facebook, whatsapp.

Unit: 5 Uses of Computer in Everyday Life

10%

Reference Books

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-205	19070402021100	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
 - -Randhawa M.S
 - -I.C.A.R. New Delhi
- 4. Creating small gardens
 - -roy strong
 - -conran octopus ltd, London

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-205	19070402021200	Personality development		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 amonb human correspondence.	
1.4	Internal at steps for efficient personality.	
Unit: - 2	Influence of self development.	20%
2.1	Identification of own goals	
2.2	suggestions for self development	
2.3	keys for self development	
2.4	knowledge requirement for P.D	
2.5	Three importance dimensions of P.D	
2.6	Slogans for successful life.	
Unit: - 3	Positive self image	20%
3.1	Types hurdles & evaluations, of self image.	
3.2	Factors affects of self image.	
3.3	positive effects of self image	

Unit 4 Self affections & self impression

20%

- characteristics of excessive self affection 4.1
- 4.2 Factors of self realization.

Unit 5 Frame of reference.

20%

- Possibility of values of life and its concept 5.1
- concept of "myself as a complete personality" 5.2
- Fundamental thought & values of modern management. 5.3
- Ten styles of management. 5.4

Reference:-

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

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-206	19070502021300	Gujarati	2	30	70		2.5 Hrs

Title :- પ્રશિષ્ટ કૃતિઓ

કૃતિઓઃ-

- (૧) " માધવ કયાંય નથી" હરીન્દ્ર દવે
- (૨) "િદ્ધરેફની વાતો " ભાગ ૧ રા.વિ.પાઠક

હેતુઓઃ-

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

અભ્યાસક્રમ

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એકમ :- ૧ નવલકથા સાહિત્ય સ્વરૂપનો ઉદ્ભવ વિકાસ	90%
એકમ :- ૨ હરીન્દ્ર દવેના જીવન - કવનનો પરિચય	90%
એકમ :- ૩ " માધવ કયાંય નથી" નવલકથાનું સમગ્ર લક્ષી મૂલ્યાંકન, કથાવસ્તુ, પાત્રાલેખન, સંવાદકળા,	વાર્તાવર,
વર્શનકળા નવલકથાનો આરંભ - અંત, શીર્ષક વગેરેના સંદભે	30 %
એકમ :- ૪ ટુંકીવાર્તાનો ઉદભવવિકાસ અને સર્જક રા.વિ. પાઠકનું - જીવન - કવન	૧૫ %
એકમ ઃ- ૫ દ્વિરેફની વાતો <i>-</i> ભાગ ૧ નું સમગ્ર લક્ષી મૂલ્યાંકન.	૩૫ %
૧ થી ૧૩ - વાર્તાઓ - દરેક વાર્તાનું સ્વતંત્ર રસદર્શન પાત્રના સંદર્ભમાં - સંદર્ભ સમજુતિ વગે	.રેને
ધ્યાનમાં રાખી મૂલ્યાંકન	

સદર્ભ ગ્રંથોઃ-

- ૧. ગ્રંથ અને ગ્રંથકાર શ્રેણી ગુજરાત સાહિત્ય પરિષદ
- ર.ગુજરાતી સાહિત્ય ભાગ ૧ થી ૪ સં ઉમાશંકર જોશી
- ૩.ગુજરાતી સાહિત્યનો ઈતિહાસ રમણલાલ ચી. શાહ
- ૪.ગુજરાતી સાહિત્યની રૂપરેખા ભાગ ૧ ૨ -વિજયરાય ક. વૈધ
- ૫.ગુજરાતી સાહિત્યની વિકાસ રેખા ધીરૂભાઈ ઠાકર
- દ. નવલકાથાઃ શિલ્પ અને સર્જક ડૉ. નરેશવેદ, પ્રકાશક પ્રવિણ પુસ્તક ભંડાર, રાજકોટ પ્ર.આ. ૧૯૮૩
- ૭. નવલકથા સ્વરૂપ પ્રવીણ દરજી યુનિ. ગ્રંથનિર્માણ બોર્ડ અમદાવાદ પ્ર આ. ૧૯૮૬
- ૮. ટુંકીવાર્તા વિજયશાસ્ત્રી, ચંદ્રમૌલી પ્રકાશન અમદાવાદ પ્ર આ ૧૯૮૪
- ૯. " માધવ કયાંય નથી" હરીન્દ્ર દવે
- ૧૦. "દ્વિરેફની વાતો " ભાગ ૧ રા.વિ. પાઠક

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Cours e Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-206	19070502021400	English	2	30	70		2.5 Hrs

Title: English Grammar and language

Objectives:-

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

Course		100%
Unit – 1	Text – JULIUS CEASER- by WILLIAM SHAKESPEARE	20 %
Unit – 2	Parts of Speech and Articles	20 %
Unit – 3	Tenses and Modal Auxiliaries Verbs	30 %
Unit – 4	Prefix Suffix and Word Building	15 %
Unit – 5	Application writing / business letter writing	15 %

Reference Books

- 1. Wren and Martin English Grammar
- 2. Essentials of English Grammar
- 3. Communication Skills Basic Theories by Ms. Krupa Purohit, Dr. I.G. Purohit
- 4. JULIUS CEASER- William Shakespeare Flipkart

Name of Course	Sem.	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Int. marks	Ext. marks	Prac./ viva marks	Ext. exam time duration
M.R.S.	II	M.MDC-206	19070502021500	Economics of cooperation	2	30	70		2.5 Hrs

Title: Economics of Cooperation

Objectives:

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

Course:

- Unit 1 Origin, Meaning and definition co-operation, Principles, values and characteristics of co-operation, Role of Co-operatives in agri. and rural development.
- Unit 2 Comparison of Cooperation with other economic system like Capitalism, socialism, communism and mixed economy.
- Unit 3 Nature, importance, objectives, function and limitation of
 PACS, District central coop. banks, state coop. banks. Processing co Operative
 Marketing co Operative
- Unit 4 Roll of the state in development of co Operative sector, government controls and its effects on co Operative activity
- Unit 5 Evaluation of Indian co-operative movement.

 Successes and limitations 15%

Reference Books

Theory, history and practice of co-operative.
 Co-operative movement in India
 Rural Development co-operation.
 What is co-operation?
 The law and principles of co-operation.
 Factors Affecting liabilities
 Rao S.B

7. Co-operative in agriculture.

8. Co-operative and rural development. -Kanitha