

**SHRI GOVIND GURU UNIVERSITY,
GODHRA**



Faculty of Arts
Syllabus for
BRS (Honors)
(Bachelor of Rural Studies)

Choice Based Credit System

With Effect From: 2021-22

B.R.S (Bachelor of Rural Studies) Hons.
Undergraduate Curricula and Syllabus
As per NEP-2020

Course Objective: The objective of the Course is to provide higher education to develop rural society and the nation- Contributing to the development of rural background through education.

Learning Objectives of Program:

1. To provide higher education in rural areas and to develop rural society and the nation.
2. Student(s) can get the knowledge about the Rural Economy.
3. Student(s) can understand the better way to develop rural business and entrepreneurship
4. To learn advanced technology based on rural development.
5. To understand the SSIP in an agribusiness

Introduction

Shri Govind Guru University is established by Government of Gujarat Wide Act No.24/2015. According to the provision of the act of University, The Jurisdiction of Shri Govind Guru University is five district of Central Gujarat. i.e. Panchmahal, Dahod, Mahisagar, Chhotaudepur and Vadodara. Panchmahal district depicts that it has got tremendous linkage with social work, social welfare and social development related activities. Higher education in this district demands special attention. Higher education in Rural Studies stream is a need of the district. Rural Studies being emerging stream offering application based theoretical & field - work practicum, it prepare ground for introducing BRS Honors course in this university with following purpose.

The purpose of the **Bachelor of Rural Studies (Honors)** course is to "provide higher education in rural areas and to develop rural society and the nation". Currently, most of the employment is growing in "**Organic Farming**" in agriculture and "**Dairy Technology Development**" in Animal Husbandry. In addition to the traditional subject matter, the study also includes "Organic Farming" and "Dairy Technology and Development" as the main subjects.

Ordinances and Rules

SGGU ORD-1: Admission Criteria: In this course Std. 12 pass (Arts, Commerce, and Science) students will be eligible for admission. Existing Rules for reservation and relaxation for certain category of students as stipulated by the Government and the University will be followed during admission procedure.

SGGU ORD-2: Medium of instruction - The medium of instruction for BRS course shall be Gujarati.

SGGU ORD-3: Any student who has dropped out between one year, two years or three years will be able to get admission and start again at the beginning of the concerned semester, i.e student would be allowed multiple entry and exit.

SGGU ORD-4: Attendance: Students must have at least 75% of attendance in each course in order to appear in the examination.

SGGU ORD-5: Examination pattern will be 30 marks for Internal continuous evaluation and 70 marks for External examination conducted by SGGU.

A.) There shall be examinations at the end of each semester. A candidate who does not pass the examination shall be permitted to appear for the failed subjects in the subsequent examinations. The minimum passing marks shall be 40% (The candidate must pass both internal as well as university examinations)

B.) For purpose of declaring a candidate to have qualified for the BRS First Class with Distinction/ First / Second/ Pass class, the candidate must pass both internal as well as university examinations.

C.) A candidate will be awarded a First Class with Distinction if he/she secures a minimum of 75% of the total marks. (ii) A candidate will be awarded a First Class if he/she secures a minimum of 60% of the total marks. (iii) A candidate will be awarded a Second Division if he/she secures a minimum of 50% of the total marks. (iv) A candidate will be awarded a Pass Class if he/she secures minimum of 40% of the total.

D.) The rules for keeping terms (ATKT) shall be as per the norms of the SGGU as declared from time to time.

SGGU ORD-6: A Candidate will be allowed 10% of gracing marks for each paper and 20 marks of gracing in all the subjects.

SGGU ORD-7: Award in the Degree: - The structure of Undergraduate programs of study will be implemented as per NEP 2020 as under:

- 1) This program designed as Undergraduate program of either 3- or 4-years duration, with multiple exit options within this period with appropriate certifications:
- 2) A certificate issued by SGGU After completing 1 year (2 Semesters) of study in this course.
- 3) After the successful completion of the 2 year (4 semesters) the student will be awarded a Diploma in Select subject,

- 4) After completion of 3 year (6 semesters) the student will be awarded a Bachelor's Degree in Rural Study by SGGU.
- 5) After completion of 4 year (8 semesters) the student will be awarded a Bachelor's degree with honors in Rural Study by The Shri Govind Guru University
- 6) A Bachelor's degree "with Research" after completion of 4 year (8 Semesters) Program of the Rural Study if the student completes a rigorous research project in His/Her main subject of the study by the SGGU.
- 7) If student have completed his/her bachelor's degree (Honors/Research) program with research will eligible for 1 year master's program.
- 8) Undertaking a PhD in Rural Study program shall require either a Master's degree or a 4-year Bachelor's degree with research.

SGGU ORD-8: Student would be allowed to change the principal subject in 2nd years (i.e from 3rd semester)

SGGU ORD-9: The student will have to choose an elective subject in addition to the subject in the core subject. The same subject cannot be chosen for both core and elective.

SGGU ORD-10: Provision of ABC and Transfer of Credits:

1. As per UGC has issued a regulation namely the University Grant Commission (Establishment and Operation of Academic Bank of Credits in Higher Education) Regulations, 2021, Students belonging to eligible in Bachelor of Rural Studies can avail the facility of ABC. Students shall be required to earn at least 50% of the credits from the parent institution where he/she is enrolled for this program. ABC is a facility for credit accumulation transfer and redemption. Degree / Diploma / Certificate shall be awarded by the registered Institute.
2. Credit means the Standard Methodology of Calculating one hour of theory or one hour of tutorial or two hours of laboratory work, per week for a duration of a semester (30-15 weeks) resulting in the award of one credit; which is awarded by a higher educational institution. Credits for internship shall be one credit per one week of internship, subject to a maximum of six credits.
3. Accumulated credits transfer and consolidate the credits earned by them by undergoing courses in the Academic Bank Account opened by students
4. Student can avail the process of commuting the accrued credits in the Academic Bank Accounts of the students maintained in ABC for the purpose of fulfilling the credits requirements for the award of Degrees or Diplomas or Certificates or course work for Ph.D. program in Rural Studies.
5. As per rules Credits deposited in the ABC platform will be valid for a maximum of seven years or the duration specified for a given discipline.

RBRS-1 Commencement of the Academic Session: As per university academic calendar.

Syllabus: Total Papers (Theory and Practical) in 4 years (8 Semester) will be 48 [total 186 credits]. Out of total papers in 7th semester one paper contain Internship and in 8th semester one paper contains Dissertation work and seminar presentation which carries 24 credits each.

Credit Distribution		
Courses		Credits
Theory/Practical Courses	46 (Papers *3 Credit)	138
Internship	1(Paper*24)	24
Project Work	1(Paper*24)	24
	Total	186

RBRS-2 The CBCS is not only student centric in the teaching-learning processes but is also their evaluation process. In CBCS, the evaluation process is divided into two parts under the CBCS. The first part-consists of Internal Evaluation and the second part consists of the Semester End Examination. In the CBCS, the evaluation process shall follow the norm that the faculty, who teaches the course, shall conduct the Internal Evaluation and the Semester end examination. The concerned faculty shall be accountable for transparency and reliability of the entire evaluation of the student in the concerned Course.

Fee Structure:

Detail	Sem -1	Sem-2	Sem- 3	Sem -4	Sem-5	Sem-6	Sem -7	Sem -8
Education Fee	20000	20000	20000	20000	20000	20000	20000	20000
Exam Fee	550	550	550	550	550	550	550	550

Syllabus

FACULTY OF RURAL STUDIES

U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)

SEMESTER-I COURSE

Sr. No	Course Category	Credit Hours	Course Title
1	FND1	3	Study of Indian Vedas
2	FND2	3	Gujarati
		3	Hindi
3	CORE -1	3	1.Agronomy
		3	2.Ani. Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
4	CORE -2	3	1.Agronomy
		3	2. Animal Husbandry
		3	3. Dairy Technology
		3	4. Rural Extension
		3	5. Organic Farming
5	ELT - 1	3	1.Agronomy
		3	2.Animal Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
6	ELT- 2	3	1. Agriculture Engineering
		3	2. History of Indian culture
		3	3. Basic Management Skills
		3	4. Rural Development
7	ELT- 3	3	1.An Introduction to Kautilya's Economics and Political Science
		3	2 Communication skills
		3	3. Rural Technology
		3	4. Yoga for better Health

FACULTY OF RURAL STUDIES

**U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)
SEMESTER-II COURSE**

Sr. No.	Course Category	Credit Hours	Course Title
1	FND3	3	Various welfare schemes for farmers
2	FND4	3	Gujarati
		3	Hindi
3	CORE -3	3	1.Agronomy
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
4	CORE -4	3	1.Agronomy (Food Processing)
		3	3. Animal Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming(Food Processing)
5	ELT - 5	3	1.Agronomy
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
6	ELT- 6	3	1. Agri. Engineering
		3	2. History of Indian culture
		3	3. Social Psychology
		3	4. Rural Development
7	ELT- 7	3	1. Rural Finance and Economic Development
		3	2. Computer Fundamentals
		3	3. Indian Value System
		3	4. Ethics and Values in Business

FACULTY OF RURAL STUDIES

**U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)
SEMESTER-III COURSE**

Sr. No	Course Category	Credit Hours	Course Title
1	FND-5	3	Introduction to Rural Marketing
2	FND-6	3	Gujarati
		3	HINDI
3	CORE-5	3	1.Agronomy
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
4	CORE-6	3	1. Agronomy (Recent Techniques for higher Crop Production)
		3	2. Animal Husbandry
		3	3. Dairy Technology(Dairy Products)
		3	4. Rural Extension
		3	5. Organic Farming (Recent Techniques for higher Crop Production)
5	CORE-7	3	1.Agronomy
		3	2.Ani.Husbandry
		3	3.Dairy Technology(Cooperative Dairy)
		3	4.Rural Extension
		3	5.Organic Farming
6	CORE-8	3	1.Agronomy (International Trends in Crops)
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming (International Trends in Crops)
7	ELT- 8	3	1. Basic Concepts of Rural Management
		3	2. Personality Development
		3	3. Use of Latest Communication Techniques
		3	4. An Introduction to Indian Philosophical Systems

FACULTY OF RURAL STUDIES

**U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)
SEMESTER-IV COURSE**

S R. N o.	Course Category	Credit Hours	Course Title
1	FND-7	3	An introduction to public relations
2	FND-8	3	Gujarati
		3	Hindi
3	CORE - 9	3	1.Agronomy
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
4	CORE - 10	3	1.Agronomy
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
5	CORE - 11	3	1.Agronomy
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5.Organic Farming
6	CORE - 12	3	1. Agronomy(Agriculture Engineering)
		3	2.Ani.Husbandry
		3	3.Dairy Technology
		3	4.Rural Extension
		3	5. Organic Farming(Agriculture Engineering)
7	ELT- 9	3	1. Eminent Indian Educationists
		3	2. Rural Entrepreneurship Development
		3	3. Great Indian Philosophers
		3	4. Public Health and Hygiene.

FACULTY OF RURAL STUDIES

U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)

SEMESTER-V COURSE

Sr No.	Course Category	Credit Hours	Course Title
1	FND-9	3	1. Official Correspondence
2	CORE - 13	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
3	CORE - 14	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
4	CORE - 15	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
5	CORE - 16	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
6	CORE - 17	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming

FACULTY OF RURAL STUDIES

**U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)
SEMESTER-VI COURSE**

Sr. No.	Course Category	Credit Hours	Course Title
1	FND-10	3	An Introduction to Digital Marketing
2	CORE-18	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
3	CORE- 19	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
4	CORE -20	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
5	CORE -21	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
6	CORE -22	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming

FACULTY OF RURAL STUDIES

**U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)
SEMESTER-VII COURSE**

SR. No.	Course Category	Credit Hours	Course Title
1	CORE-23	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
2	CORE- 24	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
3	CORE -25	4 4 4 4 4	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
4	CORE -26	24	1.Introduction to SSIP and 2.Internship in NGO/Company/Industries/Govt. dept

FACULTY OF RURAL STUDIES

U.G.COURSES IN BACHELOR OF RURAL STUDIES- (BRS)(Honors)

SEMESTER-VIII COURSE

Sr. No	Course Category	Credit Hours	Course Title
1	CORE-27	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
2	CORE- 28	3 3 3 3 3	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
3	CORE -29	4 4 4 4 4	1.Agronomy 2.Ani.Husbandry 3.Dairy Technology 4.Rural Extension 5.Organic Farming
4	CORE -30	24	1.Dissertation Work and Seminar Presentation

BRS (HOUNORS) SEMESTER 1 SYLLABUS

Name of Course	Sem.	Core/Elective/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Pra./viva/marks	Ext. exam time/Duration
B.R.S.	I	FND-1		Study of Indian Vedas	3	30	70	--	2:30 Hrs
B.R.S.	I	FND-2		GUJARATI	3	30	70	--	2:30 Hrs
				HINDI	3	30	70	--	2:30 Hrs
B.R.S.	I	CORE- 1		Agronomy	3	30	50	20	2 Hrs
				Animal/Husbandry	3	30	50	20	2 Hrs
				Dairy Technology	3	30	50	20	2 Hrs
				Rural extension	3	30	50	20	2 Hrs
				Organic Farming	3	30	50	20	2 Hrs
B.R.S.	I	CORE- 2		Agronomy	3	30	50	20	2 Hrs
				Animal Husbandry	3	30	50	20	2 Hrs
				Dairy Technology	3	30	50	20	2 Hrs
				Rural extension	3	30	50	20	2 Hrs
				Organic Farming	3	30	50	20	2 Hrs
B.R.S.	I	ELT- 1		Agronomy	3	30	50	20	2 Hrs
				Animal Husbandry	3	30	50	20	2 Hrs
				Dairy Technology	3	30	50	20	2 Hrs
				Rural extension	3	30	50	20	2 Hrs
				Organic Farming	3	30	50	20	2 Hrs
B.R.S.	I	ELT- 2		Agriculture Engineering	3	30	50	20	2 Hrs
				History of Indian culture	3	30	70	--	2:30 Hrs
				Basic Management Skills	3	30	70	--	2:30 Hrs
				Rural Development	3	30	70	--	2:30 Hrs
B.R.S.	I	ELT- 3		An Introduction to Kautilya' Economics	3	30	70	--	2.30 Hrs
				Communication Skills-1	3	30	70	--	2.30 Hrs
				Rural Development	3	30	70	--	2.30 Hrs
				Yoga for better Health	3	30	70	--	2.30 Hrs

Name of Course	Sem.	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	FND-1		Study of Indian Vedas	3	30	70	--	2:30 hours

Title: Study of Indian Vedas

Objectives:

- Student will get Basic knowledge about 4 Vedas
- To get Knowledge of Sanhita, Brahman Granth, Aranyaka
- Students will Understand Vedic Civilization and Culture
- To understand about Applications of Vedas in Day Today Life

Theory:

Unit-1 Introduction to Vedas:

Vaidic Rushi, Rrushika, Devata

Unit-2 Intoduction to Rugved and Atharvaved

Rugved - Samhita, Brahmanas, Aranyakas, Upanishadas, Vaidic Chhand and Chhandanushasan

Unit-3 Intoduction to Samved and Yajurved

Samved - Samhita, Brahmanas, Aranyakas, Upanishadas
Upavedas - Ayurveda, Gandharvaveda, Dhanurved
Yajurved - Samhita, Brahmanas, Aranyakas, Upanishadas

Unit-4 Ved - Ideals of Human life

Introduction of Religious Books
Bhagvad Geeta
Ramayana, Mahabharata
Shri Swaminarayan Code of Ethics

References:

- Encyclopaedia of Vedas : Sharma V. P., Anmol Publications Pvt Ltd
- Complete Vedas [Sanskrit & Hindi] Arya Prakashan
- The Vedas : Sri Chandrasekharendra Saraswati/Sankaracharya of Kanchi Kamakoti Peetham

Name of Course	Sem .	Core/ELT/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./viva marks	Ext. exam time duration
B.R.S.	I	FND-2		Hindi	3	30	70	--	2.30 Hrs

Title: हिन्दी उपन्यास 'ग़बन' प्रेमचंद

Objectives:-

- १ छात्र उपन्यास के स्वरूप को समझे ।
- २ छात्र भाषाज्ञान प्राप्त करें ।

इकाई –

- १ साहित्यकार का जीवन – कवन
- २ उपन्यास का स्वरूप – तत्व
- ३ उपन्यासका उद्भव – विकास
- ४ संसंदर्भ व्याख्या

पाठ्य विषय :- 'ग़बन' प्रेमचंद

प्रकाशक:- राजकमल प्रकाशन न्यु दिल्ली

Name of Course	Sem .	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Pra./ viva marks	Ext. exam time duration
B.R.S.	I	FND-2		Gujarati	3	30	70	--	2.30 Hrs

Title: કૃતિ અભ્યાસ (ગદ્ય)

કૃતિ :- ‘વળામણા – લેખક : પન્નાલાલ પટેલ :

એકમ :- ૧ લઘુનવલનું સ્વરૂપ – ગુજરાતી લઘુનવલમાં — વળામણાંનું સ્થાન

એકમ :- ૨ વળામણાં કૃતિની સમગ્રલક્ષી સમીક્ષા વળામણાં: વિષય અને માવજતનું સંતુલન

એકમ :- ૩ વળામણાં: ની ભાષા / ગદ્ય વળામણાં ની પાત્રસૃષ્ટિ મનોરદાનું ચરિત્ર ચિત્રણ

એકમ :- ૪ વળામણાં : સમય સંકલના વળામણાં : શીર્ષક

સંદર્ભગ્રંથ :

- પન્નાલાલ – જોષી રમણલાલ
- ગુજરાતી કથાવિશ્વ : લઘુનવલ – સંપા. ડા. નરેશવેદ
- કથા સાહિત્યનું વિવેચન – ભારતી દલાલ: ખુટાલા પ્રકાશન, અમદાવાદ: આ ૧૯૭૫
- અર્વાચીન ગુજરાતી સાહિત્યનો ઇતિહાસ ધીરુભાઈ ઠાકર

Name of Course	Sem.	Core/ELT/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Pra./viva marks	Ext. exam time duration
B.R.S.	I	Core -1		Agronomy	3	30	50	20	2 Hrs

Title: Soil Science

Objectives:-

- To study about rocks and minerals.
- To aware about the importance of soil in agriculture.
- To study the formation of soil.
- To know the composition of soil.
- To know physical and chemical characteristics of soil.
- To study about soil profile.

Theory:

Unit 1. Origin of earth:

Earth as part of the universe, Origin of the Earth, Earth-the unique Planet where Sustains life. Soil and Minerals

Unit 2. Soil formation:

5 factors affecting soil formation- Parent material Climate Organisms Topography Time, Rocks, Weathering,

Unit 3. Soil profile:

Mineral, Water, Organic matter, Gases, Microorganisms

Unit 4. Classification of Soil:

Sandy soil, Clay Soil, Silt Soil, Peat Soil, Chalk Soil, Loam Soil, Soil physical and chemical Characteristics and Soil moisture

Practical:

- Study of soil Augur.
- Method of collect of soil sample.
- Study of soil profile.
- Physical analysis of soil.

Reference Books:

- Jamin Vigyan ane vyavestha. (Gujarati Edition)-BabubhaiAvarani, Anadaprakashan, Ahmedabad.
- Soil science -Harilal Desai, charottar book store, aanand.
- Jamin Vyavastha ane Pak Utpadan(Gujarati Edition)- Ambalal Patel & Ramanlal Joshi
- Agriculture science -M. H. Mehta

Name of Course	Sem .	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	CORE- 1		Animal Husbandry	3	30	50	20	2 Hrs

Title: Soil Science

Objectives:-

- To study about rocks and minerals.
- To aware about the importance of soil in agriculture.
- To study the formation of soil.
- To know the composition of soil.
- To know physical and chemical characteristics of soil.
- To study about soil profile.

Theory:

Unit 1. Origin of earth:

Earth as part of the universe, Origin of the Earth, Earth-the unique Planet where Sustains life. Soil and Minerals

Unit 2. Soil formation:

5 factors affecting soil formation- Parent material Climate Organisms Topography Time, Rocks, Weathering,

Unit 3. Soil profile:

Mineral, Water, Organic matter, Gases, Microorganisms

Unit 4. Classification of Soil:

Sandy soil, Clay Soil, Silt Soil, Peat Soil, Chalk Soil, Loam Soil, Soil physical and chemical Characteristics and Soil moisture

Practical:

- Study of soil Augur.
- Method of collect of soil sample.
- Study of soil profile.
- Physical analysis of soil.

Reference Books:

- Jamin Vigyan ane vyavestha. (Gujarati Edition)-BabubhaiAvarani, Anadaprakashan, Ahmedabad.
- Soil science -Harilal Desai, charottar book store, aanand.
- Jamin Vyavastha ane Pak Utpadan(Gujarati Edition)- Ambalal Patel & Ramanlal Joshi Agriculture science -M. H. Mehta

Name of Course	Sem .	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	CORE- 1		Dairy Technology	3	30	50	20	2. Hrs

Title: Soil Science

Objectives:-

- To study about rocks and minerals.
- To aware about the importance of soil in agriculture.
- To study the formation of soil.
- To know the composition of soil.
- To know physical and chemical characteristics of soil.
- To study about soil profile.

Theory:

Unit 1. Origin of earth:

Earth as part of the universe, Origin of the Earth, Earth-the unique Planet where Sustains life. Soil and Minerals

Unit 2. Soil formation:

5 factors affecting soil formation- Parent material Climate Organisms Topography Time, Rocks, Weathering,

Unit 3. Soil profile:

Mineral, Water, Organic matter, Gases, Microorganisms

Unit 4. Classification of Soil:

Sandy soil, Clay Soil, Silt Soil, Peat Soil, Chalk Soil, Loam Soil, Soil physical and chemical Characteristics and Soil moisture

Practical:

- Study of soil Augur.
- Method of collect of soil sample.
- Study of soil profile.
- Physical analysis of soil.

Reference Books:

- Jamin Vigyan ane vyavestha. (Gujarati Edition)-BabubhaiAvarani, Anadaprakashan, Ahmedabad.
- Soil science -Harilal Desai, charottar book store, aanand.
- Jamin Vyavastha ane Pak Utpadan(Gujarati Edition)- Ambalal Patel & Ramanlal Joshi
- Agriculture science -M. H. Mehta

Name of Course	Sem.	Core/ELT/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./viva marks	Ext. exam time duration
B.R.S.	I	CORE- 1		Rural extension	3	30	50	20	2 Hrs

Title: Soil Science

Objectives:-

- To study about rocks and minerals.
- To aware about the importance of soil in agriculture.
- To study the formation of soil.
- To know the composition of soil.
- To know physical and chemical characteristics of soil.
- To study about soil profile.

Theory:

Unit 1. Origin of earth:

Earth as part of the universe, Origin of the Earth, Earth-the unique Planet where Sustains life. Soil and Minerals

Unit 2. Soil formation:

5 factors affecting soil formation- Parent material Climate Organisms Topography Time, Rocks, Weathering,

Unit 3. Soil profile:

Mineral, Water, Organic matter, Gases, Microorganisms

Unit 4. Classification of Soil:

Sandy soil, Clay Soil, Silt Soil, Peat Soil, Chalk Soil, Loam Soil, Soil physical and chemical Characteristics and Soil moisture

Practical:

- Study of soil Augur.
- Method of collect of soil sample.
- Study of soil profile.
- Physical analysis of soil.

Reference Books:

- Jamin Vigyan ane vyavestha. (Gujarati Edition)-BabubhaiAvarani, Anadaprakashan, Ahmedabad.
- Soil science -Harilal Desai, charottar book store, aanand.
- Jamin Vyavastha ane Pak Utpadan(Gujarati Edition)- Ambalal Patel & Ramanlal Joshi
- Agriculture science -M. H. Mehta

Name of Course	Sem .	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	CORE- 1		Organic Farming	3	30	50	20	2. Hrs

Title: Soil Science

Objectives:-

- To study about rocks and minerals.
- To aware about the importance of soil in agriculture.
- To study the formation of soil.
- To know the composition of soil.
- To know physical and chemical characteristics of soil.
- To study about soil profile.

Theory:

Unit 1. Origin of earth:

Earth as part of the universe, Origin of the Earth, Earth-the unique Planet where Sustains life. Soil and Minerals

Unit 2. Soil formation:

5 factors affecting soil formation-
Parent material Climate Organisms Topography
Time, Rocks, Weathering,

Unit 3. Soil profile:

Mineral, Water, Organic matter,
Gases, Microorganisms

Unit 4. Classification of Soil:

*Sandy soil, Clay Soil, Silt Soil, Peat Soil, Chalk Soil,
Loam Soil, Soil physical and chemical Characteristics and Soil moisture*

Practical:

- Study of soil Augur.
- Method of collect of soil sample.
- Study of soil profile.
- Physical analysis of soil.

Reference Books:

- Jamin Vigyan ane vyavestha. (Gujarati Edition)-BabubhaiAvarani, Anadaprakashan, Ahmedabad.
- Soil science -Harilal Desai, charottar book store, aanand.
- Jamin Vyavastha ane Pak Utpadan(Gujarati Edition)- Ambalal Patel & Ramanlal Joshi
- Agriculture science -M. H. Mehta

Name of Course	Sem .	Core/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	CORE- 2		Agronomy	3	30	50	20	2 Hrs

Title: Principles of crop production

Objectives:-

1. To aware the students about plant-soil relationship.
2. The students can know about the tillage and tillage management to increase the crop yield. 3.To aware the students about sowing methods, fertilizer managements and after crop of the
for maximum yield of the crop.
4. The students can know the importance of crop rotation and mixed cropping in crop production & better soil management.

Unit: - 1 Plant – soil Relationship.

What is plant – soil relationship? Factors affecting plant growth.
Light.Temperature.Relative humidity. Soil aeration.
Soil structure texture and soil fertility.
Soil porosity and its importance.Soil microorganisms.Soil reactions.

Unit: - 2

Tillage.
What is tillage? Aims of tillage, Types of tillage.
Depth of tillage & number of tillage. Preparation of soil for sowing.
Factors affecting requirements of tillage, Limitations of tillage

Unit: - 3

Seed & sowing.
Seed & its importance. Characteristics of good seeds. Seed treatments before sowing. Methods of sowing.
Methods of planting, Sowing / planting distance. Factors determining Sowing / planting Depth of sowing. Seed rate.

Unit: - 4

Fertilizers and its importance.
Plant nutrients.Reasons for loss of plant nutrients from soil.
Classification of chemical fertilizers.Organic manures.F. Y. M. & its merits.
Composts & its preparation.Green manuring.Oil cakes.
Crop rotation & mixed cropping. What is crop rotation.Principles of crop rotations.
What is mixed cropping. Merits & Demerits of mixed cropping.

Practical

Study of methods of irrigation
Study of tillage implements
How to take soil sample- methods of collecting soil sample
Methods of FYM and compost preparation
Visit to crop museum

References:-

- “JaminVyavastha&pakUtpadan (Guj. Ed.)
- Dr. A. S. Patel & Dr. R. S. Joshi.
- “Krushipragati” (Gujarati Ed.)
- IshwarbhaiChaturbhai Patel.
- Fundamentals of Agronomy.
- Gopal Chandra De.
- “Pak UtpadanVigyan” (Gujarati Ed.)
- BabubhaiAvarani.
- “JaminVigyan&JaminVyavastha” (Gujarati Ed.)
- BabubhaiAvarani.
- Modern Techniques of Raising Field crops”
- Chhidasingh.

Name of Course	Sem .	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	CORE- 2		Animal Husbandry	3	30	50	20	2 Hrs

Title: Domestic Animals and Cattle Breeds

Objectives:-

- To understand importance of domestic animals in human life.
- To know the contribution of animal husbandry in Indian economy.
- To identify and know different foreign and indigenous breeds of cattle and buffalos with their characteristics.
- To understand the importance of cross breeding and cross bred animals
- To understand the importance of pasture and its maintenance in rural economy.
- To know digestion of ruminants and the scientific way of fodder production for cattle.

Theory:

Unit: 1 Origin and Domestication

- Origin and Domestication of Animals. Zoological Classification of Common domestic animals.

Unit: 2 Contributions of Animals and Animal Rearing:

- Contribution of animals in human development and development of rural and National economy, Importance of Animal husbandry
- Methods of animal rearing: Free ranching, Semi ranching and closed barn method, their merits and demerits

Unit: 3 Animal Breeds and Breed Characteristics:

- Classification of Cattle breeds of India and their Characteristics
- Classification of foreign breeds of cows and their Characteristics.
- Types of Buffalo breeds and characteristics of important buffalo breeds-
Cross breeding

Unit: 4 Requirements of Successful Dairy Businesses:

- Market, government policy, land and irrigation, farm size, labor, productivity, etc.
- Fundamental pillars of Dairy business: Reproduction and breeding, Nutrition, Management and Health control.

Practical:

Note: Each practical carries equal credit and weight.

Study of different units of a dairy farm.

Character study of important cow breeds of Gujarat: Gir, Kankrej

Character study of important foreign breeds of cow: Jersey and HF cows

Character study of important buffalo breeds of Gujarat: Jafarabadi, Surati, and Bunny.

Identification of important animal feeds and fodders

Reference Books:

"PashuVyavastha" (Gujarati) - A.D. Dave & Lakshman Patel

"ViyavaharuGopalan" (Gujarati) - Krushnalal Shukul

"PashuSanvardhan" (Gujarati) - R.K. Shukul

"Pashupalan" (Gujarati) G. P. Sabapara, V.B. Kharadi, et al.

Animal Gynaecology and Veterinary Obstetrics - part 2 and 3

- S.B. Kodagali & B.K. Bhavsar

A Text book of Animal Husbandry - G.C. Banerjee

A Hand Book of Animal Husbandry - ICAR

Name of Course	Sem .	Core/ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	CORE- 2		Dairy Technology	3	30	50	20	2 Hrs

Title: Domestic Animals and Cattle Breeds

Objectives:-

- To understand importance of domestic animals in human life.
- To know the contribution of animal husbandry in Indian economy.
- To identify and know different foreign and indigenous breeds of cattle and buffalos with their characteristics.
- To understand the importance of cross breeding and cross bred animals
- To understand the importance of pasture and its maintenance in rural economy.
- To know digestion of ruminants and the scientific way of fodder production for cattle.

Theory:

Unit: 1 Origin and Domestication

- Origin and Domestication of Animals. Zoological Classification of Common domestic animals.

Unit: 2 Contributions of Animals and Animal Rearing:

- Contribution of animals in human development and development of rural and National economy, Importance of Animal husbandry
- Methods of animal rearing: Free ranching, Semi ranching and closed barn method, their merits and demerits

Unit: 3 Animal Breeds and Breed Characteristics:

- Classification of Cattle breeds of India and their Characteristics
- Classification of foreign breeds of cows and their Characteristics.
- Types of Buffalo breeds and characteristics of important buffalo breeds-Cross breeding

Unit: 4 Requirements of Successful Dairy Businesses:

- Market, government policy, land and irrigation, farm size, labor, productivity, etc.
- Fundamental pillars of Dairy business: Reproduction and breeding, Nutrition, Management and Health control.

Practical:

Note: Each practical carries equal credit and weight.

Study of different units of a dairy farm.

Character study of important cow breeds of Gujarat: Gir, Kankrej

Character study of important foreign breeds of cow: Jersey and HF cows

Character study of important buffalo breeds of Gujarat: Jafarabadi, Surati, and Bunny.

Identification of important animal feeds and fodders

Reference Books:

"PashuVyavastha" (Gujarati) - A.D. Dave & Lakshman Patel

"ViyavaharuGopalan" (Gujarati) - Krushnalal Shukul

"PashuSanvardhan" (Gujarati) - R.K. Shukul

"Pashupalan" (Gujarati) G. P. Sabapara, V.B. Kharadi, et al.

Animal Gynaecology and Veterinary Obstetrics - part 2 and 3

- S.B. Kodagali & B.K. Bhavsar

A Text book of Animal Husbandry - G.C. Banerjee

A Hand Book of Animal Husbandry - ICAR

Name of Course	Sem	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	CORE- 2		Rural extension	3	30	50	20	2 Hrs

Title: **Introduction of Rural Extension**

Objectives:

1. To Combining holistic knowledge with extension knowledge
2. To Introducing the topic of expansion.
3. To examine approaches to the subject of extension

Theory

UNIT -1

The importance, meaning and necessity
formal education and
non-formal education
extension education

UNIT -2

Characteristics of extension Services
extension education,
Misconceptions about education in Extension

UNIT -3

Objectives of extension education
Roles of Extension education
Relation between Community development and Extension Education

UNIT -4

Principles of extension education
Philosophy of extension education

Practicle:

1. Practicing diversity education
2. Practicing non-formal education
3. Examining the usefulness of the extension by survey

Name of Course	Sem	Core/ELT/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./viva marks	Ext. exam time duration
B.R.S.	I	CORE- 2		Organic Farming	3	30	50	20	2. Hrs

Title: Principles of crop production

Objectives:-

- To aware the students about plant-soil relationship.
- The students can know about the tillage and tillage management to increase the crop yield. 3.
- To aware the students about sowing methods, fertilizer managements and after crop of the for maximum yield of the crop.
- The students can know the importance of crop rotation and mixed cropping in crop production & better soil management.

Unit: - 1 Plant – soil Relationship.

What is plant – soil relationship? Factors affecting plant growth. Light, Temperature, Relative humidity, Soil aeration, Soil structure texture and soil fertility, Soil porosity and its importance, Soil micro organisms, Soil reactions

Unit: - 2 Tillage.

What is tillage? Aims of tillage, Types of tillage. Depth of tillage & number of tillage. Preparation of soil for sowing. Factors affecting requirements of tillage, Limitations of tillage

Unit: - 3 Seed & sowing.

Seed & its importance. Characteristics of good seeds. Seed treatments before sowing. Methods of sowing. Methods of planting, Sowing / planting distance. Factors determining sowing / planting Depth of sowing. Seed rate.

Unit: - 4 Fertilizers and its importance.

Plant nutrients, Reasons for loss of plant nutrients from soil. Classification of chemical fertilizers, Organic manures, Y. M. & its merits. Composts & its preparation, Green maturing, Oil cakes. Crop rotation & mixed cropping, What is crop rotation, Principles of crop rotations. What is mixed cropping, Merits & Demerits of mixed cropping

Practical

Study of methods of irrigation
Study of tillage implements
How to take soil sample- methods of collecting soil sample

References:-

- “JaminVyavastha&pakUtpadan (Guj. Ed.)
- Dr. A. S. Patel & Dr. R. S. Joshi.
- “Krushipragati” (Gujarati Ed.)
- IshwarbhaiChaturbhai Patel.
- Fundamentals of Agronomy.
- Gopal Chandra De.
- “Pak UtpadanVigyan” (Gujarati Ed.)
- BabubhaiAvarani.
- “JaminVigyan&JaminVyavastha” (Gujarati Ed.)
- BabubhaiAvarani.
- Modern Techniques of Raising Field crops”
- Chhidasingh.

Name of Course	Sem .	Core/ ELT/ Foun dation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva mark s	Ext. exam time duratio n
B.R.S.	I	ELT- 1		Agronomy	3	30	50	20	2 Hrs

Title: Principles of crop production

Objectives:-

- To aware the students about plant-soil relationship.
- The students can know about the tillage and tillage management to Increase the crop yield. 3.
- To aware the students about sowing methods, fertilizer managements and after crop of the for maximum yield of the crop.
- The students can know the importance of crop rotation and mixed cropping in crop production & better soil management.

Unit: - 1 Plant – soil Relationship.

What is plant – soil relationship? Factors affecting plant growth.
Light, Temperature, Relative humidity, Soil aeration,
Soil structure texture and soil fertility,
Soil porosity and its importance, Soil micro organisms, Soil reactions

Unit: - 2 Tillage.

What is tillage? Aims of tillage, Types of tillage.
Depth of tillage & number of tillage. Preparation of soil for sowing.
Factors affecting requirements of tillage, Limitations of tillage

Unit: - 3 Seed & sowing.

Seed & its importance. Characteristics of good seeds. Seed treatments before sowing. Methods of sowing.
Methods of planting, Sowing / planting distance. Factors determining sowing / planting Depth of sowing. Seed rate.

Unit: - 4 Fertilizers and its importance.

Plant nutrients, Reasons for loss of plant nutrients from soil.
Classification of chemical fertilizers, Organic manures, Y. M. & its merits.
Composts & its preparation, Green maturing, Oil cakes.
Crop rotation & mixed cropping, What is crop rotation, Principles of crop rotations.
What is mixed cropping, Merits & Demerits of mixed cropping

Practical

Study of methods of irrigation
Study of tillage implements
How to take soil sample- methods of collecting soil sample

References:-

- “JaminVyavastha&pakUtpadan (Guj. Ed.)
- Dr. A. S. Patel & Dr. R. S. Joshi.
- “Krushipragati” (Gujarati Ed.)
- IshwarbhaiChaturbhai Patel.
- Fundamentals of Agronomy.
- Gopal Chandra De.
- “Pak UtpadanVigyan” (Gujarati Ed.)
- BabubhaiAvarani.
- “JaminVigyan&JaminVyavastha” (Gujarati Ed.)
- BabubhaiAvarani.
- Modern Techniques of Raising Field crops”
- Chhidasingh.

Name of Course	Sem .	Core/ ELT/ Foun dation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva mark s	Ext. exam time duratio n
B.R.S.	I	ELT- 1		Animal Husbandry	3	30	50	20	2 Hrs

Title: Animal Husbandry

Objectives:

- (1) To understand importance of domestic animals in human life.
- (2) To know the contribution of animal husbandry in Indian economy.
- (3) To identify and know different foreign and indigenous breeds of cattle and buffalos with their characteristics.
- (4) To understand the importance of cross breeding and cross bred animals
- (5) To understand the importance of pasture and its maintenance in rural economy.
- (6) To know digestion of ruminants and the scientific way of fodder production for cattle.

Theory:

Unit: 1 Origin and Domestication

- Origin and Domestication of Animals.
- Zoological Classification of Common domestic animals.

Unit: 2 Contributions of Animals and Animal Rearing:

- Contribution of animals in human development and development of rural and National economy, Importance of Animal husbandry
- Methods of animal rearing: Free ranching, Semi ranching and closed barn method, their merits and demerits

Unit: 3 Animal Breeds and Breed Characteristics:

- Classification of Cattle breeds of India and their Characteristics
- Classification of foreign breeds of cows and their Characteristics.
- Types of Buffalo breeds and characteristics of important buffalo breeds

Unit: 4 Requirements of Successful Dairy Businesses:

- Market, government policy, land and irrigation, farm size, labor, productivity, etc.
- Fundamental pillars of Dairy business: Reproduction and breeding, Nutrition

Practical:

Note: Each practical carries equal credit and weight.

Study of different units of a dairy farm

Character study of important cow breeds of Gujarat: Gir, Kankrej

Character study of important foreign breeds of cow: Jersey and HF cows

Character study of important buffalo breeds of Gujarat: Jafarabadi, Surati, and Bunny.

Identification of important animal feeds and fodders

Reference Books:

"PashuVyavastha" (Gujarati) - A.D. Dave & Lakshman Patel

"ViyavaharuGopalan" (Gujarati) - Krushnalal Shukul

"PashuSanvardhan" (Gujarati) - R.K. Shukul

"Pashupalan" (Gujarati) G. P. Sabapara, V.B. Kharadi, et al.

Animal Gynaecology and Veterinary Obstetrics - part 2 and 3

- S.B. Kodagali & B.K. Bhavsar

A Text book of Animal Husbandry - G.C. Banerjee

A Hand Book of Animal Husbandry - ICAR

Name of Course	Sem	Core/ELT/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./viva marks	Ext. exam time duration
B.R.S.	I	ELT-1		Dairy Technology	3	30	50	20	2 Hrs

Title: Domestic Animals and Cattle Breeds

Objectives:-

- To understand importance of domestic animals in human life.
- To know the contribution of animal husbandry in Indian economy.
- To identify and know different foreign and indigenous breeds of cattle and buffalos with their characteristics.
- To understand the importance of cross breeding and cross bred animals
- To understand the importance of pasture and its maintenance in rural economy.
- To know digestion of ruminants and the scientific way of fodder production for cattle.

Theory:

Unit: 1 Origin and Domestication

- Origin and Domestication of Animals. Zoological Classification of Common domestic animals.

Unit: 2 Contributions of Animals and Animal Rearing:

- Contribution of animals in human development and development of rural and National economy, Importance of Animal husbandry
- Methods of animal rearing: Free ranching, Semi ranching and closed barn method, their merits and demerits

Unit: 3 Animal Breeds and Breed Characteristics:

- Classification of Cattle breeds of India and their Characteristics
- Classification of foreign breeds of cows and their Characteristics.
- Types of Buffalo breeds and characteristics of important buffalo breeds-Cross breeding

Unit: 4 Requirements of Successful Dairy Businesses:

- Market, government policy, land and irrigation, farm size, labor, productivity, etc.
- Fundamental pillars of Dairy business: Reproduction and breeding, Nutrition, Management and Health control.

Practical:

Note: Each practical carries equal credit and weight.

Study of different units of a dairy farm.

Character study of important cow breeds of Gujarat: Gir, Kankrej

Character study of important foreign breeds of cow: Jersey and HF cows

Character study of important buffalo breeds of Gujarat: Jafarabadi, Surati, and Bunny.

Identification of important animal feeds and fodders

Reference Books:

"PashuVyavastha" (Gujarati) - A.D. Dave & Lakshman Patel

"ViyavaharuGopalan" (Gujarati) - Krushnalal Shukul

"PashuSanvardhan" (Gujarati) - R.K. Shukul

"Pashupalan" (Gujarati) G. P. Sabapara, V.B. Kharadi, et al.

Animal Gynaecology and Veterinary Obstetrics - part 2 and 3

- S.B. Kodagali & B.K. Bhavsar

A Text book of Animal Husbandry - G.C. Banerjee

A Hand Book of Animal Husbandry - ICAR

Name of Course	Sem	Core/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	ELT-1		Rural extension	3	30	50	20	2 Hrs

Title: **Introduction of Rural Extension**

Objectives:

- To Combining holistic knowledge with extension knowledge
- To Introducing the topic of expansion.
- To examine approaches to the subject of extension

Theory

UNIT -1

The importance, meaning and necessity
 formal education and
 non-formal education
 extension education

UNIT -2

Characteristics of extension Services
 extension education,
 Misconceptions about education in Extension

UNIT -3

Objectives of extension education
 Roles of Extension education
 Relation between Community development and Extension Education

UNIT -4

Principles of extension education
 Philosophy of extension education

Practicle:

- Practicing diversity education
- Practicing non-formal education
- Examining the usefulness of the extension by survey

Name of Course	Sem .	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	ELT- 1		Organic Farming Basics	2+1	30	50	20	2 Hrs

Title: Plant protection & pest management-I

- To introduce the history, body structure and life cycle of insects to the students.
- To aware the students about survival of insects on the earth.
- To give the detailed control measures of the harmful insects to the students with more emphasizes on Biological control.
- To know the primary measures to be taken during poisoning by the insecticides to the affected persons.

Theory:

Unit-1 Introduction to Insects:

Structure of insects, Life cycle of insect-metamorphosis
 Important characteristics of insects for their survival on earth,
 Classification of insects on the basis of wing, feeding habits and economic importance.

Unit-2 Methods of insect control:

Natural methods of insect control
 Artificial methods of insect control, Physical and mechanical methods of insect control
 Cultural methods of insect control, Legal methods of insect control
 Biological methods of insect control, Chemical methods of insect control
 Integrated insect management

Unit-3 Care to be taken during handling, spraying and storage of insecticides

Unit-4 Care of a person affected by insecticide during handling, spraying and storage of insecticides

Practical:-

Calculation and preparation of spraying solution
 Study of light trap and its use
 Pheromone tripe and its use
 Formulation of insecticides
 Preparation of NPV solution for spraying to control heliothis.

References

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

Name of Course	Sem .	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	ELT- 2		Agriculture Engineering	3	30	50	20	2:00 Hrs

Title: Agriculture Engineering

Objectives:-

- To Learn to prepare farm house maps
- Students become familiar with methods of irrigation and water management
- Students learn to prepare budgets
- To Study various aspects of oil machinery
- To know of the energy used in agriculture

Theory:

UNIT-1 Building construction: Basic components, building materials, Estimated cost calculation

UNIT-2 Irrigation and drainage: The meaning of irrigation and its benefits, types and methods, Meaning of drainage and its benefits, method and type

UNIT-3 Various powers used in agriculture and Land conservation :
Manpower, animal power, mechanical power, power transmission
Causes of soil erosion, Damage from soil erosion, How to prevent soil erosion?

UNIT-4 Oil machine: Principles of oil machine, precautions to keep the machine on and off.
Tractor classification, specifications, issues to keep in mind while choosing a tractor.

Practical

- To make farm building useful maps
- Irrigation Scheme Visit and Report
- To prepare a budget

References :

- KRUSHI IJANERI BHAG-1 -2, Ambalal I. Patel
- PRATHMIK SARVEKSHAN – Jayntilal Khakahar
- KHET IJNERI , Babubhai Avrani

Name of Course	Sem .	Core/ ELT/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Ext. exam time duration
B.R.S.	I	ELT- 2		History of Indian culture	3	30	70	2.30 Hrs

Title: History of Indian Culture

Objectives:

- To develop an understanding of culture
- To become acquainted with the ancient culture
- To gains knowledge of Vedic culture.

UNIT-1

- The meaning, definition and form of culture
- The meaning, definition and form of civility
- Different stages of human development
- Specialty of Indian culture

UNIT-2

- Establishment, development, town planning and features of Indus culture
- Causes of the destruction of the Indus Valley Civilization
- Political, social, economic and cultural life in Indus culture
- Contribution of major towns to the civilization of Gujarat. 1. Rangpur 2. Lothal 3. Dholavira

UNIT-3

- Different views on the origin of the Aryans
- The social, political, cultural life and religious life of the Aryans of the Vedic period
- General introduction of Vedas

UNIT-4

- General introduction to epics
- Social, moral and cultural contribution of *Ramayana*
- The social, moral and cultural contribution of the *Mahabharata*

References :

- (1) જગતના ઇતિહાસની રૂપરેખા – જશુભાઈ પટેલ
- (2) માર્ક ડિંદનુ' દર્શન – જવાહરલાલ નહેરૂ
- (3) ભારતીય સંસ્કૃતિની તાત્વિક ભુમિકા – ડૉ. મુકુન્દરાય કોટેયા
- (4) પ્રાચીન ભારતનો ઇતિહાસ – આર.કે. ધારૈયા

Name of Course	Sem	Core/ELT/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Ext. exam time duration
B.R.S.	I	ELT- 2		Basic Management skills	3	30	70	2.30 Hrs

Title: Basic Management Skills

Objectives:

- Demonstrate a basic knowledge of management in terms of concepts, theories, models, tools...
- Study real business problems through an accurate evaluation, analysis and synthesis of the information
- Show creativity and positive critical thinking when presented with managerial problems.
- Improve personal management knowledge through continuous self-learning and self-evaluation

Unit-1: Business organizations and managers

- Business organizations: concept and types
- Business organizations: theoretical contributions
- Managers: concept and types
- Managers: functions, roles and skills

Unit-2 : Organizational human behavior: motivating and leading people

- Motivation in business
- Concepts of power, management and leadership
- Leadership theories
- The managerial functions

Unit-3: Formulating goals and developing planning

- Goals' concept and typology
- Different approaches to Managerial goals
- The conflict of goals
- Planning :concepts, functions and typology

Unit-4: Human Resource Management: managing people

- Human Resource Management: concept and evolution
- Qualification of human resources
- Motivation of human resources
- Human resource development

References:

- **Management.** (8th ed.) Robbins, S.P. & Coulter, M. Prentice Hall, 2005.
- Management Basics - A Practical Guide for Managers- Adams Media Corporation

Name of Course	Sem .	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	ELT-2		Indian Rural Economy	3	30	70	--	2.30 Hrs

Title: Indian Rural Economy

Objectives:-

1. To aware the students about importance of rural economy
2. To know importance of Agro. & Rural
3. To understand the Gandhian Approach & Rural Development
4. To be informed about Population Problems of policy in India

Theory

Unit 1 Introduction

- Meanings and characteristics of rural Economics
- Contribution of Rural Economy India's Economic Development

Unit: 2 Agriculture labour

- Meaning classification
- Present state and problems of Agriculture labour in India
- Problems of Bonded labours, Measures
- Remedies for improving the condition of farm labourers

Unit: 3 Rural unemployment

- Meaning , types
- Causes of rural unemployment
- Measures to reduce unemployment

Unit: 4 Rural poverty

- Meaning, Natures, present state in India
- Causes of rural poverty
- Remedies for alleviation poverty in India

REFERENCES:-

- Rudra A.- Indian Agricultural Economics
- Rudra Dutt and K.P.M Sundharma – Indian Economy
- A.N. Agarwal- Indian Economy
- Vasant desai - Fundamental of rural development
- Sundharam I.S – Rural development
- S.K Ray – India Economy

Name of Course	Sem.	Core/MDC/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./viva marks	Ext. exam time duration
B.R.S.	I	ELT-3		An Introduction to Kautilya's Economics	3	30	70	--	2.30 Hrs

Title: An Introduction to Kautilya's Economics

Objectives:-

- To study about Kautilya's Basic Economic Concepts
- To be aware about the importance his economic concepts.
- To study the nature and working of Ancient Political System.
- To know about Kautilya's Economic and Political Ideas.

Theory:

Unit 1.

- Introduction to the Basic Economic Concept.
- Introduction to the basic political concept,
- Introduction to the concept of Kingship
- Basic duties of the ruler and the executor

Unit 2.

- Economics and its role in our personal, familial, organizational, national as well as global wellbeing
- The subtle as well as a complex relationship between economy & politics
- Foreign policy, taxation, savings, expenditure
- Concept of Wealth and It's Ownership

Unit 3.

- Kautilya Saptang - Seven Sources of Income
- Law and Constitution
- Law and Administration
- Suppression of Crime

Unit 4.

- Three Tier Political System - DharmaDand, RajDand, NyayDand
- Ancient Foreign Policy Management
- Creation of Wealth & it's Distribution Management
- The relationship between Leadership & Mentoring

Reference Books:

1. Arthashastra of Kautilya: Relevance in the 21st Century – Ed. Dr. Suresh R, Vij Books India Pvt Ltd.
2. Kautilya's Arthshastra, Jaico Publication House
3. Kautilya's Arthshastra, by R. Shamashastry, Dev Publishers and Distributors.

Name of Course	Sem.	Core/MDC/Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./viva marks	Ext. exam time duration
B.R.S.	I	ELT-3		Communication Skills	3	30	70	--	2.30 Hrs

Title: Communication Skills

Objectives:-

- Develop interest in literary works.
- Improve student's basic grammar, sentence construction and vocabulary.
- Hone writing skills.
- Build confidence in public speaking.

Theory:

Unit 1. Listening Skills

- Listening skills: to enhance correct understanding of the language being spoken and to give apt responses in written where required.
- Types of listening and Traits of a good listener
- Note taking
- Exercises Practising Listening Skills – talk shows , commentaries, etc., followed by identifying the theme, supporting ideas, or and digressions if any

Unit 2. Speaking Skills

- To enhance the basic speaking skills, one needs apt word and the correct pronunciation.
- Simple rules of pronunciation and intonation
- Theme based vocabulary building
- Antonyms/Synonyms/Homonyms

Unit 3. Reading Skills

- To enhance independent reading, comprehension and quick reading of any given texts and aesthetic appreciation
- Comprehension of Passages
- News/magazine articles on stereotype topics and/or current topics
- Poems – Abu Ben Adhem "The Tiger"

Unit 4. Writing Skills

- To reinforce the grammatical structures
- Grammar – Kinds of sentences – Positive, negative, statement, interrogative and exclamatory [learn the functional aspects of these sentences – when are they used, how are they structured etc.]
- Articles and nouns – Countable/uncountable, Names with and without THE Adjectives/Adverbs [describing things, adding information, circumstances]
- Prepositions of time/place/reason – in, on, at , into , to , for , of, about, with, after etc.

Reference Books:

1. Alice Oshima, *Writing Academic English*, Pearson Longman.
2. Betty Schramper Azar, *Understanding and Using English Grammar*, Prentice HallCollege Div.
3. Raymond Murphy, *English Grammar in Use*, Cambridge University Press.
4. Susan F. Miller, *Targeting Pronunciation: The Intonation, Sounds and Rhythm of American English*, Houghton Miffl in Company.

Name of Course	Sem .	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	ELT-3		Rural Development	3	30	70	--	2.30 Hrs

Title: Rural Development

Objectives:-

- Develop interest in Rural Planning.
- Develop interest in Rural Administration.
- Develop Interest in Natural Development and Management
- Develop interest in rural marketing and management

Theory:

Unit 1. Rural Planning & Development

- Concepts, Principles and Approaches: Concept of development: Indicators of development; Conceptual framework, Strategies;
- Rural development in India: A retrospective; Policies, Programs:
- Techniques of planning: Detail steps in district and block level planning
- Area Development Planning: Definition, purpose, Area development plans.

Unit 2. Panchayati Raj & Rural Administration

- Administrative Structure: bureaucracy, structure of administration; Panchayati Raj Institutions and Voluntary Agencies:
- Functions of government and non-government organizations for rural development; Agricultural Extension Services
- Emergence and Growth of Panchayati Raj Institutions in India
- Interfaces - Panchayats and Govt. Officials; Government & Non-Government Organizations / Community Based Organizations.

Unit 3. Natural Resources Development & Management

- Natural resources: Inexhaustible natural resources – the atmosphere and water in its cycle; Replaceable and maintainable natural resources
- Irreplaceable natural resources – Minerals, Land in its natural condition.
- Natural resources- Evaluation and Assessment, Utilization, Conservation- principles and practices.
- Replaceable and maintainable natural resources – water in its place, Soil, Land in its spatial sense, Forest, Forage and other cover plants, Wild Animal life, Human powers body & spirit

Unit 4. Rural Marketing & Management

- Rural production and products: agricultural and non-agricultural products; types of rural production and products;
- Market functionaries: Concept of supply chain management and Value Addition
- Involved in marketing of agricultural and non-agricultural products
- Problems of marketing; Role of co-operative agencies in marketing of agricultural and non-agricultural product.

Reference Books:

- D. Gangopadhyay, A.K. Mukhopadhyay & Pushpa Singh (2008), 'Rural Development: A Strategy for Poverty Alleviation in India', S & T for Rural Development and Inclusive Growth, India, Science and Technology.
- Dr. C. Chandramouli (2011), 'Rural Urban Distribution of Population', Ministry of Home Affairs, Census of India 2011, New Delhi, 15th July, 2011. Dey, S., & Bedi, A. (2010), 'The National Rural Employment Guarantee Scheme in Birbhum', Economic and Political Weekly, VolXLV, Issue - 41, pp-19-25.
- Farooq Ahmad Ganiee (2014), 'Transforming Rural India (2018-19), Ministry of Rural Development, Government of India', International Journal of English Language, Literature and Humanities, Vol-1, Issue -V, Feb 2014.
- George Allen and Unwin Ltd., (1954), 'Economic Development with unlimited supplies of labour', in the Manchester School 22 May; pp-139-32
- Nandini Francis (2015), 'Sustainable Rural Development through Agriculture: An Answer to Economic Development in India', International Journal of Current Research, Vol.7, Issue-03, pp-13614 – 13618, March 2015.

Name of Course	Sem .	Core/ MDC/ Foundation	Course Code	Course Title	Credits	Internal marks	External marks	Prac./ viva marks	Ext. exam time duration
B.R.S.	I	ELT-3		Yoga for better health	3	30	70	--	2.30 Hrs

Title: Yoga for better health

Objectives:-

- Understand the definitions and the concepts of yoga and describe the historical development of yoga in India.
- Know the major schools of yoga.
- Demonstrate the different stages of the Surya Namaskar.
- Name the different types of Asanas.
- Analyze the preventive and curative effects of yoga.

Theory:

Unit 1. Introduction

- Overview ,What is Yoga , Importance of Yoga
- Yoga – Its History, Objectives of Yogic Practices, General Guidelines for Yogic Practices
- Common Yogic Practices, Yama and Niyama, Asana, Pranayama, Pratyahara
- Common Yoga Practices-2, Bandha Mudra, Shatkarma/Kriya, Meditation

Unit 2. History and Development of Yoga

- Origin of Yoga and the Indus Valley Civilization
- Psychological aspects leading to origin of Yoga
- Vedic, pre-classical and classical period in Yoga
- Yoga in medieval and modern times

Unit 3. Yoga for Health

- Overview: Surya Namaskar
- Tadasana, Vrikshasana, Utkatasana, Vajrasana
- Swastikasana, Ardhapadmasana, Niralamba Bhujangasana, Ardhashalabhasana, Makarasana
- Pawanamuktasana, Shavasana, Breathing with Awareness, Trataka, Meditation

Unit 4. Yoga for Stress Management

- What is Stress
- Yoga as a Way of Life for Stress Management
- Yogic Practices for Stress Management (Asanas)
- Meditation and Yoga for healthy living

Reference Books:

1. Aruna Goel, (2007). Yoga education: Philosophy and practice, New Delhi: Deep & Deep Publications.
2. Ashwani Kumar (2015). Yoga: A way of life. New Delhi: Khel Sahitya Kendra.
3. Aggarwal J. C. (1996), teacher and education in a developing society. New Delhi: Vikas Publishing House.
4. Dash, B.N. (2004) Trends and issues in Indian education. New Delhi: Dominant Publishers. 5. Getchell Bud (1992), Physical fitness a way of life, New York: Macmillan publishing company