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VEER NARMAD SOUTH GUJARAT UNIVERSITY
University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.

વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી

યુનિવર્સિટી કેમ્પસ, ઉદ્ધના-મગદલા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.

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ક્રમાંક:એકે/પરિપત્ર/૯૨૬૯/૨૦૨૧

તા.૦૧/૦૭/૨૦૨૧

પ્રતિ,
ડૉ. વિપુલ સોમાણી,
પ્રોફેસર એન્ડ હેડ,
ડીપાર્ટમેન્ટ ઓફ રૂરલ સ્ટડીઝ,
મહાતમા ગાંધી ગ્રામઅભ્યાસ બિલ્ડીંગ,
વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી,
સુરત.

વિષય :- M.R.S.(SD) ના સેમેસ્ટર-૩ અને ૪ ના વિવિધ વિષયનો અભ્યાસક્રમ બાબત.

સુજ્ઞા શ્રી,

સવિનય જણાવવાનું કે, ગ્રામ અભ્યાસ વિષયના બોર્ડ દ્વારા નિમાયેલ પેટાસમિતિઓએ તૈયાર કરેલ M.R.S. (SD) ના સેમેસ્ટર-૩ અને ૪ ના વિવિધ વિષયનો અભ્યાસક્રમ ગ્રામઅભ્યાસ વિષયની અભ્યાસસમિતિ તથા ગ્રામ અભ્યાસ વિદ્યાશાખાની સંયુક્ત સભાની તા. ૧૮-૦૩-૨૦૨૧ નાં ઠરાવ ક્રમાંક: ૨ અન્વયે નીચે મુજબ બી.યુ.ટી. ને ભલામણ કરેલ, જે અંગે અનુસ્નાતક શિક્ષણ મંડળ (બી.યુ.ટી) એ તેની તા. ૧૦/૦૬/૨૦૨૧ ની સભાના ઠરાવ ક્રમાંક : ૯ અન્વયે કરેલી નીચેની ભલામણ એકેડેમિક કાઉન્સિલની તા. ૨૫-૨૬/૦૬/૨૦૨૧ ની સભાનાં ઠરાવ ક્રમાંક: ૦૩ અન્વયે મંજૂર કરેલ છે. તેની જાણ સંબંધકર્તા શિક્ષકો અને વિદ્યાર્થીઓને કરવી, તદ્દઉપરાંત તેનો અમલ કરવો.

ગ્રામઅભ્યાસ વિષયની અભ્યાસસમિતિ તથા ગ્રામઅભ્યાસ વિદ્યાશાખાની સંયુક્ત સભાની

તા. ૧૮-૦૩-૨૦૨૧ નાં ઠરાવ ક્રમાંક: ૨

:: આથી ઠરાવવામાં આવે છે કે, M.R.S.(SD) સેમેસ્ટર-૩ અને સેમેસ્ટર-૪ નું નવું માળખું અને વિવિધવિષયોના અભ્યાસક્રમો મંજૂર કરવામાં આવ્યા અને તે મંજૂર કરવા બી.યુ.ટી. ને ભલામણ કરવામાં આવે છે.


અનુસ્નાતક શિક્ષણ મંડળ તા. ૧૦-૬-૨૦૨૧ ઠરાવ ક્રમાંક (૯)

:: આથી ઠરાવવામાં આવે છે કે, ગ્રામ અભ્યાસ વિષયની અભ્યાસ સમિતિ તથા ગ્રામ અભ્યાસ વિદ્યાશાખાની સંયુક્ત સભાની તા. ૧૮-૩-૨૦૨૧ ના ઠરાવ ક્રમાંક:(૨) થી કરેલ ભલામણ મંજૂર કરી એકેડેમિક કાઉન્સિલને ભલામણ કરવામાં આવે છે

એકેડેમિક કાઉન્સિલની તા. ૨૫-૨૬/૦૬/૨૦૨૧ ની સભાનાં ઠરાવ ક્રમાંક: ૦૩

:: આથી ઠરાવવામાં આવે છે કે, ગ્રામઅભ્યાસ વિષયની અભ્યાસસમિતિ તથા ગ્રામઅભ્યાસ વિદ્યાશાખાની સંયુક્ત સભાની તા. ૧૮/૦૩/૨૦૨૧ ની સભાની ભલામણ ક્રમાંક : ૨ અને અનુસ્નાતક શિક્ષણ મંડળની તા. ૧૦/૦૬/૨૦૨૧ ની સભાની ભલામણ ક્રમાંક : ૯ અન્વયે સ્વીકારેલ શૈક્ષણિક વર્ષ ૨૦૨૧-૨૨ થી અમલમાં આવનાર M.R.S.(SD) સેમેસ્ટર-૩ અને સેમેસ્ટર-૪ નું નવું માળખું અને વિવિધ વિષયોના અભ્યાસક્રમો મંજૂર કરવામાં આવે છે.

બિડાણ: ઉપર મુજબ


ઈ.ચા.કુલસચિવ

પ્રતિ,

- ૧) બી.આર.એસ.નો અભ્યાસક્રમ ચલાવતી સંલગ્ન કોલેજોના આચાર્યશ્રીઓ.
- ૨) ડીનશ્રી, ગ્રામઅભ્યાસ વિદ્યાશાખા,
- ૩) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.



Department of Rural Studies
Veer Narmad South Gujarat University, Surat

Academic Year = 2021 - 22

Syllabus

MRS(SD) Semester - III & IV

**Credits of Five year Integrated Programme in Sustainable Development –
MRS(SD)**

Subject Code	Subject Name	Credits	Hours Per Week	Tutorials Per Week
Semester - I				
MRSSD1.1	Basic Concepts of Economics	4	3	1
MRSSD1.2	General Sociology	4	3	1
MRSSD1.3	General Principles of Ecology and Environment	4	3	1
MRSSD1.4	Introduction of Sustainability	4	3	1
MRSSD1.5	Developmental Writing, Reading and Public Speaking	4	3	1
MRSSD1.6	Environmental Issues- Local	4	3	1
	Total Credits of Semester – I	24		
Semester – II				
MRSSD 2.1	Principles of Economics	4	3	1
MRSSD 2.2	Developmental Sociology	4	3	1
MRSSD 2.3	Need of Sustainability	4	3	1
MRSSD 2.4	Composition and interpersonal communication	4	3	1
MRSSD 2.5	Environmental issues-National	4	3	1
MRSSD 2.6	Environment and Man	4	3	1
	Total Credits of Semester - II	24		
Semester – III				
MRSSD 3.1	Social Theory and sociology of development	4	3	1
MRSSD 3.2	Social responsibility and Sustainable Development/Society and Culture in contemporary India	4	3	1
MRSSD 3.3	Developmental Economics/ Indian Rural Economy	4	3	1
MRSSD 3.4	Gender and Environment/ Management of Co-operatives	4	3	1
MRSSD 3.5	Biodiversity and conservation/ Panchayati Raj and Rural Development	4	3	1
MRSSD 3.6	Application of environmental science/ Sustainable Crop production and organic farming	4	3	1
	Total Credits of Semester - III	24		
Semester – IV				
MRSSD 4.1	Global Environmental Issues/ Animal Husbandry and Dairying	4	3	1
MRSSD 4.2	Technology, environment and society/ Soil science and agriculture management	4	3	1
MRSSD 4.3	Principles of Geo-informatics/ Horticulture	4	3	1
MRSSD 4.4	Sustainable Energy Resource	4	3	1
MRSSD 4.5	EIA and Environmental Audit/ Information Technology in Rural Development	4	3	1
MRSSD 4.6	Rural Development Policies and Programmes	4	3	1
	Total Credits of Semester – IV	24		
Semester – V				

Subject Code	Subject Name	Credits	Hours Per Week	Tutorials Per Week
MRSSD 5.1	Environmental Economics/ Rural Entrepreneurship	4	3	1
MRSSD 5.2	Sustainable Rural Development	4	3	1
MRSSD 5.3	Common property resource management	4	3	1
MRSSD 5.4	Sustainable water management/ Rural Planning and Development	4	3	1
MRSSD 5.5	Legal provisions for sustainability in India	4	3	1
MRSSD 5.6	Sustainability Communications Strategy and Reporting/ Rural Industries and Rural Technologies	4	3	1
	Total Credits of Semester – V	24		
Semester – VI				
MRSSD 6.1	Sociology of Development and Environment	4	3	1
MRSSD 6.2	Economy and sustainability	4	3	1
MRSSD 6.3	Governance and Management of Natural Resources/ Rural Marketing	4	3	1
MRSSD 6.4	Food Security and Agriculture/ Crop protection	4	3	1
MRSSD 6.5	Research Methodology	4	3	1
MRSSD 6.6	Field based project work	4	3	1
	Total Credits of Semester - VI	24		
	Total Credits of Semester I to VI	144		
Semester – VII				
MRSSD 7.1	Human Resource management for non-profit organizations	4		
MRSSD 7.2	Quantitative analysis for Development Practice	4	3	1
MRSSD 7.3	Developmental Economics - I	4	3	1
MRSSD 7.4	Integrated approaches for S D	4	3	1
MRSSD 7.5	Environment, Development and Sustainability	4	3	1
MRSSD 7.6	Quantitative analysis for Development Practice	4	3	1
	Total Credits of Semester - VII	24		
Semester – VIII				
MRSSD 8.1	Development Economics- II	4	3	1
MRSSD 8.2	Social Research Methods	4	3	1
MRSSD 8.3	Law, Society and sustainable development	4	3	1
MRSSD 8.4	Key concept of cultural and political ecology	4	3	1
MRSSD 8.5	Renewable energy, policy, planning and management	4	3	1
MRSSD 8.6	Science and Policy of climate change	4		
	Total Credits of Semester – VIII	24		
Semester – IX				
MRSSD 9.1	Economics of climate change/Environmental Economics	4	3	1
MRSSD 9.2	Sustainable Development for weaker section	4	3	1
MRSSD 9.3	Governance and management of natural	4	3	1

Subject Code	Subject Name	Credits	Hours Per Week	Tutorials Per Week
	resources			
MRSSD 9.4	Management and development of organization	4	3	1
MRSSD 9.5	Management for sustainable development	4	3	1
MRSSD 9.6	Winter Placement	4	2	-
	Total Credits of Semester - IX	24		
Semester –X				
MRSSD 10.1	Food security and agriculture	4	3	1
MRSSD 10.2	Gender and Sustainable Development	4	3	1
MRSSD 10.3	Environmental Economics	4	3	1
MRSSD 10.4	Project Design and Management for SD practice	4	3	1
MRSSD 10.5	Project Work	8	3	1
	Total Credits of Semester - X	24		
	Total Credits for Semester VII-X	96		

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

MRS(SD) SEMESTER - III

Paper No. : **MRSSD 3.1**

Paper Title : **Social Theory and Sociology of Development** Credits : **4**

Objectives: A sociological theory is supposition that intends to consider, analyze And/or explain objects of the social reality from a sociological perspective, drawing connections between individual concepts in order to organize and substantiate sociological knowledge.

Unit:1. Social theories

- Classical social theory
- Post modern social theory
- Structural Functionalism theory
- Conflict theory
- Feminist theory

Unit:2. Theories of Development

- Modernization theory
- Dependency theory
- World system theory
- Theory of Globalization

Unit: 3. Social Development

- Meaning, definition of social development
- Features of Social Development
- Social Development in the UN's Agenda
- Social Development in India
- Factors facilitating social development
- Factors Hindering social development

Unit:4. Approaches of Development

- An Introduction of Approaches of Development
- The capitalist model of development
- The socialist model of development
- Gandhian model of development

References:

Berger, Peter L. and Thomas Luckmann. The Social Construction of Reality: A Treatise in the Sociology of Knowledge. New York: Anchor Books. ISBN: 978-0-385-05898-8.

Collins, Patricia Hill. Black Sexual Politics: African Americans, Gender, and the New Racism. New York: Routledge. ISBN: 978-0415951500.

Durkheim, Emile. *Suicide: A Study in Sociology*. Edited with an introduction by George Simpson. Translated by John A. Spaulding & George Simpson. New York: The Free Press. ISBN: 978-0684836324.

Dubois, W.E.B. 1899. *The Philadelphia Negro*.

DuBois, W.E.B., *The Souls of Black Folk*

Durkheim, Emile. 1912. *The Elementary Forms of Religious Life*.

Foucault, Michel. 1990 [1978]. *The History of Sexuality, An Introduction*. New York: Vintage Books.

Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. Translated by Alan Sheridan. New York: Vintage Books. ISBN: 978-0679752554.

Goffman, Erving. *The Presentation of Self in Everyday Life*. New York: Anchor Books. ISBN: 978-0385094023.

hooks, bell. 1981. *Ain't I a Woman?: Black Women and Feminism*. [ISBN 0-89608-129-X](#)

Mead, George Herbert. 1934. *Mind, Self, and Society*. University of Chicago Press. Mills, C. Wright. *The Power Elite*.

Omi, Michael and Howard Winant. 1994. *Racial Formation in the United States: From the 1960's to the 1990's*. New York: Routledge.

Reyes, Giovanni E., **FOUR MAIN THEORIES OF DEVELOPMENT: MODERNIZATION, DEPENDENCY, WORD-SYSTEM, AND GLOBALIZATION** University of Pittsburgh, USA. [theory and social dev..pdf](#)

Smith, Dorothy. 1987. *The Everyday World as Problematic*. Boston: Northeastern University.

Smith, Dorothy. 1990. *The Conceptual Practices of Power*.

Sociology of Development, [SD - social development and theories.pdf](#)

Warner, Michael. 1999. *The Trouble with Normal: Sex, Politics and the Ethics of Queer Life*. New York: Free Press.

Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*. Translated by Talcott Parsons. Introduction by Anthony Giddens. New York: Routledge. ISBN: 978-0415084345.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

MRS(SD) SEMESTER - III

Paper No. : **MRSSD 3.2**

Paper Title : **Social Responsibility and Sustainable Development**

Credits : **4**

Objectives: This course will familiarize the students with the concept of social responsibility and corporate social responsibility too. The evolution of CSR has far reaching consequences on the development sector in India. The collaboration of companies and NGOs with the community has initiated a new paradigm of change in the country. The paper will discuss a few prominent case studies of CSR.

Unit:1. Social Responsibility

- Concept and meaning of social responsibility
- Advantages of social responsibility
- Types of social responsibility
- Opinions in favour of social responsibility
- social responsibilities for different Interest groups

Unit: 2. corporate social responsibility

- Defining CSR
- Components of CSR
- Key drivers, History and Evolution of CSR in the Indian and international context
- CSR policies and Governance, Laws and Regulations

Unit:3. Stakeholder engagement in Social Responsibility

- Role of NGOs in developing CSR
- interaction in a multi-stakeholder context
- Community involvement, investment and evaluation
- Human Resource management – labor security and human rights.

Unit; 4. Corporate Social Responsibility and sustainable development

- CSR solutions to poverty
- creating livelihoods through skilling persons in the community
- Health care under CSR
- Creating health care infrastructure
- Sustainable sanitation solutions
- Delivering better education through CSR partnerships
- Case studies from different companies.

References:

1. Agarwal, S. (2008). Corporate social responsibility in India. Los Angeles: Response.

2. Baxi, C. (2005). Corporate social responsibility: Concepts and cases : The Indian experience. New Delhi, India: Excel Books.
3. Bhattacharya, D. Corporate social development: A Paradigm shift. New Delhi: Concept publishing company
4. Crane, A. (2008). Corporate social responsibility: Readings and cases in a global context. London: Routledge.
5. Visser, W. (2011). The age of responsibility CSR 2.0 and the new DNA of business. Chichester, West Sussex: John Wiley & Sons.
6. Visser, W. (2007). The A to Z of corporate social responsibility a complete reference guide to concepts, codes and organisations. Chichester, England: John Wiley & Sons.
7. Werther, W., & Chandler, D. (2006). Strategic corporate social responsibility: Stakeholders in a global environment. Thousand Oaks: SAGE Publications
8. Sustainable development, [SD - social development and theories.pdf](#)
9. <https://byjus.com/commerce/what-is-social-responsibility/>

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT	
MRS(SD) SEMESTER - III	
Paper No.	: MRSSD : 3.3
Paper Title	: Indian Rural Economy Credits : 4

Objectives :-

This paper is prepared with the objective to create awareness among the students regarding the rural economy of India and factors affecting it. It also provides insight on the role of agriculture and animal husbandry in rural economy. It also deals with new avenues to reduce unemployment and poverty from the rural India.

Unit-I Rural Economy of India

- Characteristics of rural economy
- Role and importance of agriculture and animal husbandry in rural economy

Unit-II Agricultural productivity and marketing

- Farm size, land utilization and cropping pattern, causes of low agricultural productivity, measures taken to improve productivity.
- Importance, merits and demerits of present system of marketing agricultural produce. New policy for marketing of agricultural produce.
- Role of irrigation facilities, transport and communication and electrification in increasing income of farmers.

Unit-III Rural poverty and unemployment

- Causes and extent of rural poverty and unemployment, various rural development program including MGNREGA for reducing the rural poverty and unemployment

Unit-IV Rural Industrialization and finance

- Need, importance and problems of agro-based industries and cottage industries.
- Need and sources of rural finance, problems of rural indebtedness and its relief measures
- Soils erosion- its types, effects and methods of prevention.

Unit-V Practices / field visits

- Visit to selected villages and village institutions (bank, dairy, agriculture market, etc.) to understand various components of rural economy

REFERENCES :

1. Tyagi B P Agricultural Economics and Rural Development. Jai Prakashan, Merrut.
2. Mamoria C B and Tripathi BB. Agricultural problems of India. Century Printers, Allahabad
3. Nanavati M B and Anjaria J J. The Indian Rural Problems. Vora and Co., Mumbai.
4. Misra S K and Puri V K. Indian Economy, Himalaya Publishing Co.
5. Dutt R and Sundharam K P M. Indian Economy. S. Chand and Company, New Delhi.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

MRS(SD) SEMESTER - III

Paper No. : **MRSSD 3.4**

Paper Title : **C0-operatives Management**

Credits : **4**

Objectives:

1. To enable them to understand the principles, value and economic activities of cooperation.
2. To enable them to understand emergence and development of co operative Activity in the world.
3. To facilitate them to understand the forms of cooperative activities and management
4. To provide insights about NABARD and NDDDB as well as AMUL model of cooperative in India

Unit: 1. Content of co operation

- Meaning and characteristics of co operation
- Modern principles of co operation
- Values of co operation
- Economic Activities and co operation(Capitalism, socialism and mixed co operation)

Unit:2. Emergence and development of co operative Activities

- Emergence and development of co operative Activity in the world(England, Germany, Denmark, Israel)
- Emergence and development of co operative Activity in India
- Emergence and development of co operative Activity in Gujarat

Unit:3. Forms of co operative Activity and management

- Introduction of Forms of various co operatives
- Co operative farming society
- Co operative Irrigation society
- Primary milk producers Co operative
- Primary agricultural credit Co operative society
- Sugar producers Co operative
- Management of Co operative societies

Unit: 4. Preliminary Introduction of co operative societies

- NABARD
- National Dairy Development Board (NDDDB)
- National Co operative Development Corporation
- AMUL

Suggested Readings:

1. Gupta, K.B, Siddiqui, F and Alam, I(2011). Rural Management. Word Press, Lucknow.
2. Nakkiran, S (2006). Cooperative Management-Principles and Techniques, Deep & Deep Publications Pvt. Ltd: New Delhi

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

MRS(SD) SEMESTER - III

Paper No. : **MRSSD 3.5**

Paper Title : **Panchayati Raj and Rural Development**

Credits : **4**

OBJECTIVE:

The Students understand the role of gram panchayat in planning and become aware of self-governance, village development and Gandhiji's concept of village self-government. Despite this the student to study the structures for village planning and develops face to face understanding.

Unit: 1 Historical perspective of Panchayat

Evolution and development of Panchayati Raj in India
Gandhiji's concept of Gram Swaraj and panchayati raj
Gujarat panchayati raj statute:1961 – A Review
Concept and Structure of Three tier panchayati raj

Unit: 2 Three tier Panchayati Raj System

73rd Constitutional Amendment
Structure of Gram Sabha and Gram Panchayat
Functions of Gram Panchayat
Gram Panchayat and E- Governance (General Introduction)

Unit: 3 Rural Planning

Meaning and characteristics of of rural planning
Approaches of Rural Planning (Top to Down and Bottom to Up Approach)
Types of Rural Planning
1. Centralized and decentralized planning 2. Strategic and Functional planning
Meaning of Micro planning, form and characteristics (Regional /specific planning)

Unit: 4 Decentralized Rural Planning System

Concept of Decentralized Planning
Need of Decentralized Rural Planning for Rural Development
Process of Decentralized Rural Planning
Understanding of authority and responsibility in relation to decentralized rural planning

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

MRS(SD) SEMESTER - III

Paper No. : **MRSSD 3.6**

Paper Title : **Sustainable Crop Production and Organic Farming** Credits : **4**

Objectives:

To make students aware of need of sustainability in crop introduction and organic farming. It also envisages to create awareness about crops of Gujarat and explain the concept of organic farming.

Unit-I Need for sustainable crop production.

- Fundamental of crop production
- Tillage – Importance & Types
- Fertilizers & Manures
- Role of water in development of plant.

Unit-II Seeds

- Importance, Types and Selection, Seed treatment, Seed Storage and Seed production.

Unit-III Crops of Gujarat

- Cereals - Wheat sorghum, paddy, Maize
- Cash crops – sugar cane, cotton, groundnut, castor.
- Vegetables – Potato, onion, Brinjal, cabbage, Leafy vegetables etc.
- Legumes – moong, urid, pignon pea, chick peas

Unit-IV Organic Farming

- Concept and need of organic farming
- Basic principles of organic farming
- Role of earthworms and other organisms in organic farming
- Compost, wormi compost & wormi wash.

References:

By - 2017

1. Arpita Mukherjee, Souvik Dutta, Tanu M. Goyal (2017) Organic Farming in India Status, Issues and Way Forward. Academic Foundation, New Delhi.
2. Palaniappan SP and Annadurai (2018) Organic Farming: Theory and Practice, Scientific Publishers, Jodhpur.

3. Somsundaram E. and UdhayaNandhini (2017) Traditional Organic Farming Practices.
New India Publishing Agency,

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

MRS(SD) SEMESTER - III

Paper No. : **MRSSD : 4.1**

Paper Title : **Animal Husbandly and Dairying** Credits : **4**

Objectives :

To make students aware of role of animal husbandly in self-employment in rural areas. This course details pillars of animal husbandly to make students ready to accept new researches in the field as animal keeper.

Unit-I Importance of animal husbandly in rural India.

- Different indigenous and exotic breeds and hybrid cow

Unit-II Animal Breeding

- Its need various types of breeding methods, basic introduction of animal reproduction, Artificial insemination- history merits and demerits.

Unit-III Animal nutrition

- Digestive system of ruminants
- Nutrients in animal feed – carbohydrates, protein, minerals, vitamins and water.
- Measuring food – Quantity and quality
- Forage crops

Unit-IV Animal housing & health

- Importance of animal housing & management of common diseases- symptoms and their treatments. Vaccination
- Composition of milk & clean milk production
- Types of dairy

Unit-V Field Visits

- Visit to dairy farm cattle breeding institute and dairy processing unit.

References:

1. ICAR (2010) Animal Husbandry, ICAR Publication, New Delhi.
2. EIRI Hand book of poultry farming and feed formulations.
3. Pashu Vyavastha: Arun D. Dave, Universtiy Granth Nirman Board, Ahmedabad

4. Shukal Krushanlal (2000) Vyavaharu Gopalan :, University Granth Nirman Board Ahmedabad
5. "Godarshan" A Monthly Gujarati Magazine, Dept. of A.H., Gujarat State, Gandhinagar
6. A Text Book of Animal Husbandry : G.C.Banerjee : Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
7. ICAR (2006) A Hand Book of Animal Husbandry. ICAR, New Delhi
8. Singh B D (2018) Principle and Methods of Plant - Breeding. Kalyani Publishers.
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MRS(SD) SEMESTER - III

Paper No. : **MRSSD : 4.2**

Paper Title : **Soil Science and agriculture management** Credits : **4**

Objectives :-

This paper is meant to make students understand the importance of soil in agriculture and the soil science. The students will know various physical and chemical properties of soil and their role in agricultural production. The paper will make the students well versed about needs and methods of soil management for sustainable agriculture.

Unit-I Meaning and formation of soil

- What is soil? Factors affecting formation of soil.
- Various types of rocks forming soil.
- Minerals forming soil – meaning and properties of various minerals and properties of various minerals, classification of minerals, study of important minerals.

Unit-II Profile and Layers

- What is soil profile?
- Ingredients of soil – Types, proportions and functions.
- Classification of soil.

Unit-III Physical and chemical properties of soil.

- Texture, structure, colour, density, porosity, consistency,
- Electric conductivity, plant nutrients, organic soil carbon, salinity, acidity

Unit-IV Management of soil

- Role of soil in sustainable agriculture
- Need for soil management, management of waste, acidic, salinity, water logged soils.
- Soils erosion- its types, effects and methods of prevention.

Unit-V Practices / field visits

- Soil and water sampling
- Visit to soil testing laboratory
- Demonstration of various types of soils

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- (1) Pandya H G. Mehta P M Hariya N H. JaminVigyan – Part 1 University Gaanth
Nirman Board
- (2) Avarani Babubhai Jaminvigyan and vyavastha. Anadaprakashan
- (3) Suthar Hasmukh Jaminvigyan and vyavastha

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MRS(SD) SEMESTER - IV

Paper No. : **MRSSD : 4.3**

Paper Title : **Horticulture**

Credits : **4**

Objectives :

To make students understand the importance of horticulture in human life. This paper will prepare the students in learning & doing various methods of propagation of horticulture crops post harvest technologies and different horticultural crops of Gujarat.

Unit-I Introduction of horticulture

- Primary requirement for cultivating horticulturally important crops- Weather, Water and soil.
- Selection of site
- Green manure and intercropping

Unit-II Methods of propagation

- Through seeds – merits demerits
- Vegetative propagation – different methods
- Tissue culture

Unit-III Treatment and value addition

- Horticulture crops and Bahar (Flowering)
- Thinning, trimming and training
- Value addition – jam, jelly, syrup, pickling & dehydration

Unit-IV Major horticulture crops of Gujarat

- Mango- sapota
- Lemon- aonla
- Banana - papaya
- Pomegranate – coconut.

References:

1. ICAR (2005) Handbook of Agriculture Indian Council of Agricultural Research, New Delhi.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT		
MRS(SD) SEMESTER - III		
Paper No.	: MRSSD : 4.4	
Paper Title	: Sustainable Energy Resources	Credits : 4

Objectives:

This paper is designed to give an insight on the need for sustainable energy resources in current period and various sources to obtain green energy.

Unit I- Scenario of Renewable Energy (RE) Sources: Needs of sustainable energy, advantages and limitations of Renewable Energy, present energy scenario of conventional and RE sources, Various non-conventional energy resources- availability, classification, relative merits and demerits

UNIT-II Solar Thermal Energy: Solar radiation, flat plate collectors and their materials, applications and performance,

UNIT-III Geothermal Energy: Resources of geothermal energy, environmental considerations.

UNIT-IV Wind Energy: Wind power and its sources, site selection, criterion,

UNIT-V Bio-mass: Availability of bio-mass and its conversion theory. Bio-gas production and utilization. Wave and Tidal Wave, Waste Recycling Plants.

References:

1. Raja et al, "Introduction to Non-Conventional Energy Resources" Scitech Publications.
2. John Twideu and Tony Weir, "Renewal Energy Resources" BSP Publications, 2006.
3. M.V.R. Koteswara Rao, "Energy Resources: Conventional & Non-Conventional" BSP Publications, 2006.
4. D.S. Chauhan, "Non-conventional Energy Resources" New Age International.
5. C.S. Solanki, "Renewal Energy Technologies: A Practical Guide for Beginners" PHI Learning.
6. Peter Auer, "Advances in Energy System and Technology". Vol. 1 & II Edited by Academic Press.
7. Godfrey Boyle, "Renewable Energy Power For A Sustainable Future", Oxford University Press.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

MRS(SD) SEMESTER - III

Paper No. : **MRSSD : 4.5**

Paper Title : **Information technology in rural development** Credits : **4**

Objectives: To make students learn about computer system, its operation and information technology. The students will get skills to use different software and office automation. The students will also get introduced to communication, networking and Internet. They will also understand E Commerce, e government and ICT schemes.

Unit 1: Introduction

Information technology – definition, concept, components, role,

Computer- definition characteristics format limitations, generations, classification, uses, computer operation, system, computer system unit, number system, BIOS, **Input-** keyboard pointing device, audiovisual device, card reader, text/code reading, sensor, control

Output: soft and hard device, audio-visual, printing, plotter

Memory: computer memory, ram, rom, flash and cache memory buffer and port

Storage: magnetic storage, nickel storage, solid state storage, back up

Multimedia

Unit 2: Software and operating system

Types of software, system and application software, language software

various operating systems and methods, work methods, classification, function, Module, interface, boot, mobile system, server system, DOS, UBANTU

Concept of windows structure, your needs, main program, Office automation program, types of data, selection of data, data organization, types of database

Unit 3: network, Internet and security

Data communication, types of transmission, signal transmission, transmission media, wireless network

Concept of network, classification, various merits, types of LAN, Topology,

Network devices: switch, repeater, bridge, router, gateway, modem, NIC

OSI layer, network and data security, firewall

Internet, connection, protocols, HTML, email, WWW, URL, IP address, domain, account

Internet services, uses, development of Internet, issues with its use.

Computer security-Ingredients, attack, security measures, types of viruses, hacking and hackers, software copyright.

E-commerce, e-government and advancement

Concept of e-commerce, types, usefulness, electronic data interchange and payment

E-government, digital device, e-readiness, info-kiosk,

E-governance in India, Digital Bharat, Digital Gujarat

GSWAN network, e gram, SWAGAT, ATVT, OJAS, Schemes for ICT, Mobile apps

System, MIS and Expert system

References:

1. SaidhantikaneHetulakshi "Computer" by Dr. Satish Patel, Dr. Satish Patel Self Publication.
2. Computer Fundamentals by Dr. Satish Patel & Mr. Bhavin Patel, Dr. Satish Patel Self Publication.
3. Computer Network by Dr. Satish Patel, Dr. Satish Patel Self Publication, Gandhinagar
4. Comdex computer course
5. Information System by Dr. Satish Patel, Self Publication, Gandhinagar
6. E-commerce by Dr. Satish Patel, Self-Publication, Gandhinagar.
7. E-Government by Dr. Satish Patel, Self-Publication, Gandhinagar.

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MRS(SD) SEMESTER - III

Paper No. : **MRSSD : 4.6**

Paper Title : **Rural Development Policies and Programmes Credits : 4**

Objectives:

To familiarize students with the policies for rural development. To cultivate the student's understanding of the Rural Development Programmes in India since Independence Earlier Programmes and Current developmental efforts in india

Unit I:Policies for Rural Development

- Land Policy; Technology Policy
- Agricultural Policy
- Employment Policy
- Education and Extension Policy
- Rural Institutions Policy; Price Policy

Unit II: Rural Development Programmes in India since Independence Earlier Programmes

- Area Development Programmes
- Target-Group Oriented Programmes
- Wage Employment Programmes
- Self Employment Programmes
- Welfare Programmes
- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
- Swarnajayanti Gram Swarajgar Yojana (SGSY)
- National Social Assistant Programmes (NSAP)

Unit III: Current Rural Development Programmes

- National Rural Livelihood Mission
- Pradhan Mantri Gramin Awaas Yojana
- Pradhan Mantri Gram Sadak Yojana (PMGSY)
- DAY-NRLM; DDU-GKY
- Sanasad Aadarsh Gram Yojana (SAGY)
- Prime minister Rural Development Fellows Scheme
- Sampurna Grameen Rozgar Yojana (SGRY)
- Swachh Bharat Abhiyan (SBA) or Swachh Bharat Mission (SBM)
- Shyama Prasad Mukherji Rurban Mission (SPMRM)

References:

B. K. Prasad, 2003, Rural Development: Concept, Approach and Strategy Sarup& Sons.

Bibhuti Bhushan Malik, 2009, Poverty in India: Fundamental Issues: a Social Science Perspective, Mittal Publications.

Bikramaditya Singh, 1992, Planning for Rural Development and Poverty Alleviation, Mittal Publications. Desai, Vasant, 1991, Fundamentals of Rural Development, New Delhi: Rawat Publications.

G. N. Karalay, 2005, Integrated Approach to Rural Development: Policies, Programmes and Strategies, Concept Publishing Company.

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