

**Manonmaniam Sundaranar University
Tirunelveli – 627 012**

University Departments

PG Degree Programmes

**Even semester / Semester – II / December
2016 – April 2017**

**List of Supportive Courses offered by University
Departments**

**List of Supportive Courses offered by the University
Departments / Centres for PG Degree Programmes in the Even
semester (December 2016 – April 2017 / Semester – II) :**

Sl. No (1)	University Department / Centre (2)	P.G. Programmes offered (Arts and Sciences) and year of course / Syllabi revised (3)	Supportive Courses offered under each PG Programme as per the SCAA approval (4)	Supportive Courses offered in the Even Semester (December 2016 – April 2017) (5)
1	Animal Science	M.Sc. Zoology (2016-'17)	1. Sericulture 2. Ethanozoology	Sericulture
2	Biotechnology	M.Sc. Biotechnology (2016-'17)	1. DNA finger Printing 2. Stemcells and Regenerative Biology 3. Vermi Biotechnology 4. Cancer Biology 5. Biotechnology and Human Health	DNA finger Printing
3	Chemistry	M.Sc. Chemistry (2016-'17)	1. Chemistry and Environment 2. Chemistry and Industry	Chemistry and Environment
4	Commerce	M.Com. Accounting and Finance (2016-'17)	1. Entrepreneurial Development 2. Management of Small enterprises	Entrepreneurial Development
5	Communication	A. M.A. Journalism and Mass Communication (2016-'17)	1. Basic Photography 2. Film appreciation 3. Human Rights Reporting 4. Citizen Journalism 5. Radio Journalism 6. Media Literacy	Basic Photography
		B. M.Sc. Electronic Media (2016-'17)	*	Nil
6	Computer Science & Engg	A. M.Sc. Computer Science (2016-'17)	*	Nil
		b. MCA (2016-'17)	1. DTP 2. Office Automation	Office Automation
7	Criminology & Criminal Justice	M.Sc. Criminology and Criminal Science (2012-'13)	1. Crime Awareness and Prevention 2. Personal Effectiveness and Efficiency	Personal Effectiveness and Efficiency
8	Economics	M.A. Economics (2016-'17)	1. Environmental Economics 2. Economics of Microfinance 3. Economics of Infrastructure 4. Indian Business Environment and Policy 5. Globalization and Indian Economy 6. Human Resource Development	Environmental Economics
9	Education	M.Ed. (2016-'17)	1. Techniques of Teaching 2. Guidance and Counseling	Guidance and Counseling
10	English	M.A. English (2016-'17)	1. English for Competitive Examinations	English for Competitive Examinations

			2. Communicative English 3. Executive English	
11	Environmental Science	A) M.Sc. Environmental Science (2016-'17)	1. Environmental Chemistry 2. Biomonitoring and Management of Industrial Pollution	*
		B) M.Sc Nano Science (2016-'17)	1. Nanobiotechnology 2. NanoChemistry	*
12	Geo-Technology	M.Sc. Applied Geophysics (2016-'17)	1. GPS Technology 2. Remote Sensing	GPS Technology
13	History	M.A. History (2016-'17)	1. History of Europe (1789-1945 C.E.) 2. History of Religions in India 3. Culture and Society in the United States 4. Constitution of India	History of Europe (1789-1945 C.E.)
14	CITE	M.Sc. Information Technology (2016-'17)	1. Office Automation 2. Photoshop	Office Automation
15	Management Studies	M.B.A. (2016-'17)	1. Managerial Skill Development 2. Direct Marketing Skills	Managerial Skill Development
16	Marine Science	A) M.Sc Marine Biotechnology (2016-'17)	1. Bioethics 2. Research Methodology	Research Methodology
		B) M.Sc Microbiology (2016-'17)	1. Extremophiles 2. Marine Natural Products	Marine Natural Products
17	Mathematics	M.Sc. Mathematics (2016-'17)	1. Numerical Methods 2. Introduction to Mathematical Biology 3. Discrete Mathematics 4. Mathematics for Competitive Examination	Numerical Methods
18	Pharmaceutical Chemistry	M.Sc. Organic Chemistry (2016-'17)	1. Pharmaceutical analysis 2. Natural products of medicinal importance	. Pharmaceutical Analysis
19	Physics	M.Sc. Physics (2016-'17)	1. Basics of Domestic Appliances 2. Electronics in Daily Life	Electronics in Daily Life
20	Physical Education & Sports	M.P.Ed. (2016-'17)	@	Nil
21	Plant Science	M.Sc. Botany	@	Nil
22	Psychology	M.Sc. Psychology (2016-'17)	1. Life Skills for Youth 2. Positive Psychology	Positive Psychology
23	Renewable Energy Sciences	M.Sc. Energy Science (2016-'17)	1. Basics of Renewable Energy Sources 2. Solar Energy Conversion Technologies	Solar Energy Conversion Technologies
24	Social Exclusion	Nil	Nil	Nil
25	Sociology	M.A. Sociology (2016-'17)	1. Organizational Behaviour 2. Health and Population Education	Organizational Behaviour
26	Statistics	A) M.Sc. Statistics (2014-'15)	1. Statistics for Behavioural Sciences 2. Advanced Statistical Methods	Advanced Statistical Methods
		B) M.Sc. Statistics & Information Technology (2016-'17)	@	Nil

27	Tamil	M.A. Tamil (2016-'17)	1. பயன்பாட்டுத் தமிழ் 2. தமிழ்ப் பண்பாட்டு இயக்கங்கள்	பயன்பாட்டுத் தமிழ்
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- * Title and syllabus for the supportive course are not given but counted for credits in the course structure table.
- @ Supportive courses are not offered in these P.G. programmes.

Department of Animal Science

Sericulture

UNIT I: INTRODUCTION

Scope and importance of Sericulture - Sericulture in India - Role of Central Silk Board - Life cycle of *Bombyx mori* – Classification based on number of larval moults and voltinism and cocoon colour shape - Morphology of *Bombyx mori* (egg-larva-pupa-adult) – Silk gland-Non-Mulberry silkworm.

UNIT II: MORICULTURE

Morphology of mulberry plant - High yielding varieties – optimum conditions for mulberry growth – planting – irrigation – manuring – pruning – harvesting and storing of mulberry leaves – Common diseases of mulberry (causative agent , symptoms and treatment)

UNIT III: GRAINAGE TECHNOLOGY

Egg breeding stations – procedure in grainage - Silkworm rearing – rearing house –rearing appliances – rearing operations

UNIT IV: DISEASES OF SILKWORM

Causative organism, symptoms and treatment for Bacterial diseases (Flacherie, Septicemia, Sotto) – fungal disease (Muscardine) - viral diseases (Infectious flacherie, Gattine , Grasserie) and protozoan disease (Pebrine) . Genetic resistance of the silkworm, *Bombyx mori*, to bacterial and viral diseases-Silkworm transgenesis and application.

UNIT V: SILK REELING

Cocoon marketing – characteristics of cocoon – cocoon stifling –Types and storage of stifled cocoons - reeling operations – reeling appliances (country charka, cottage basin) – raw silk testing

REFERENCES

1. Ganga, G and I. Sulochana chetty . An Introduction to Sericulture. Oxford and IBH Publishing co.pvt.ltd . New Delhi . 1991
2. Hisao Aruga. Principles of Sericulture . Oxford and IBH Publishing .co.pvt.ltd . New Delhi .
3. G.Rangaswami etal - Mulberry cultivation – Central sericultural Research and Training Institute - Mysore (1972)
4. Ullal .S.R and M.N.Narsimhanna - Hand Book of Practical Sericulture – Central SILK Board- Bombay.

Department of Biotechnology

DNA Finger Printing

Unit 1

Diversity of cell size and shape. Cell theory. Isolation and growth of cells. Nucleus size and shape, Chemical composition of DNA.

Unit 2

DNA sequence, single letter code for nucleotide, comparison of DNA sequences. Similarity and variation between individuals.

Unit 3

In vivo and *in vitro* Stability of DNA. Isolation of DNA from various sources. Storage of DNA.

Unit 4

Human chromosome: Gene repeats in the DNA genome. DNA characterization: DNA sequencing technique, Polymerase chain Reaction (PCR),

Unit 5

Forensic DNA analysis: Restriction length Polymorphism (RFLP), Autosomal Short Tandem Repeats (STR), Y-chromosome autosomal Short Repeats (YSTRs), Single Nucleotide Polymorphisms (SNPs)

Reference:

1. *DNA Cloning: a Practical Approach*, D.M. Glover and B.D. Hames, IRL Press, Oxford, 1995.
2. *Molecular and Cellular Methods in Biology and Medicine*, P .B. Kaufman, W. Wu.D.Kim and L.J.Cseke, CRC Press, Florida, 1995.
3. *DNA Science, A First Course in Recombinant Technology*, D.A. Mickloss and GA. Freyer, Cold Spring Harbor Laboratory Press, New York, 1990. .
4. *Molecular Biotechnology* (2IKi Edn), S.B. Primrose, Blackwell Scientific Publishers, Oxford, 1994.
5. *Milestones in Biotechnology*. Classic papers on Genetic Engineering, J.A. Davies and W.S. Reznikoff, Butterworth-Heinemann, 8Qston, 1992
6. *Genetic Engineering* Introduction to gene analysis an exploitation in eukryotes, S.M.Kingsman and A.J. Kingsman, Blackwell Scientific Publications, Oxford, 1998

DEPARTMENT OF CHEMISTRY

M.Sc. Chemistry

Chemistry and Environment

Unit I – Environment and Ecology

Introduction to environment – concept and scope, environmental segments. Ecosystem and environment. The natural cycles (H_2O , O_2 , N_2) of environment. Environmental pollution and its classification.

Unit II – Air Pollution

Atmosphere – composition, structure and evolution; green house effect and global warming; photochemical smog and acid rain. Ozone hole and El Nino phenomenon. Different types of air pollutants and sources; air quality standards.

Unit III – Water Pollution

Different types of water pollutants and sources. Eutrophication; heavy metal ions (Hg, Pb and Cr) poisoning; fluoride and defluoridation. Water quality standards.

Unit IV – Soil Pollution

Composition of soil; micro and macronutrients; wastes and pollutions in soil; disposal of municipal, medical and industrial wastes. Plants as indicators of soil pollution.

Unit V- Environmental restoration

Environmental restoration; recycling and further use of waste. Conservation of forests and wild life. The state of global environment and earth summit.

References:

1. A.K. De, Environmental Chemistry, New Age publishers, New Delhi, 3, 4 & 5th Edn., 2003.
2. B.K. Sharma and H.Kaur, Environmental Chemistry, Goel Publishing House, Meerut, 3rd Edn., 1996.
3. G.S. Sodhi, Environmental Chemistry, Narosa Publishing House, New Delhi, 2000.

DEPARTMENT OF COMMERCE

M.Com. Accounting & Finance

Entrepreneurial Development (For the Students of other Departments)

Unit I

Evolution, Characteristics, Types, Functions of Entrepreneur – Distinction between an Entrepreneur and a Manager, Concept, Growth of Entrepreneurship in India, Role of Entrepreneurship in Economic Development.

Unit II

Rural Entrepreneurship: Concept, Need, Problems, Rural Industrialization in Retrospect, How to Develop Rural Entrepreneurship, NGOs and Rural Entrepreneurship

Unit III

Women Entrepreneurship – Concept, functions, Growth of Women Entrepreneurs, Problems , Development of Women Entrepreneurs – Recent Trend.

Unit IV

Entrepreneurial Motivation- Concept, Theories, factors, Entrepreneurial Competencies Concept, Major Entrepreneurial Competencies

Unit V

Small Enterprises : Definition, Characteristics, Relationship between Small and Large Units, Rationale, Objectives, Scope, Opportunities for an Entrepreneurial Career, Role of small Enterprise in Economic development, problems of SSIs.

Note : The Question Paper should consists of 100% Theory.

References:

1. Dr.Vasant Desai, “Small Scale industries and entrepreneurship”, Himalayan Publishing House
2. Dr.Vasant Desai, “Dynamics of entrepreneurial development and Management”
3. Corporate Entrepreneurship – Paul Burns
4. The Oxford Handbook of Entrepreneurship
5. Entrepreneurship in the New Millenium – Kutatko Hodgetts
6. Collins ipand Lazier W, “Beyond entrepreneurship”, Prentice Hall, New Jersey, 1992

DEPARTMENT OF COMMUNICATION

M.A. Journalism and Mass Communication

Basic Photography

UNIT I

Foundation of historical photographic knowledge.

UNIT II

Basic camera operations.

UNIT III

Basic compositional elements.

UNIT IV

Basics of exposure and image capture

UNIT V

Basic understanding of lighting.

REFERENCE BOOKS:

1. Micheal Langford, (2000). Basic Photography, Focal Press.
2. Anna Fox, Richard Sawdon Smith, (2016) Langford's Basic Photography: The Guide for Serious Photographers, CRC Press.
3. Nanette Salvaggio, Leslie D. Stroebel, &Richard D. Zakia, (2009). Basic Photographic Materials and Processes, Taylor & Francis.
4. John Freeman, (2005). Photography: The New Complete Guide to Taking Photographs : from Basic composition to the latest digital techniques, Franz Steiner Verlag.
5. John Paul Schaefer, (1999). The Ansel Adams Guide: Basic Techniques of Photography, Volume 2 Little, Brown.

DEPARTMENT OF COMPUTER SCIENCE & ENGG

M.C.A Office Automation

Unit I: MS Word

Exploring Word 2007: Working in the Word Environment – Opening, Moving Around in, and closing Document – Creating and Saving A Document – Previewing and Printing Document – Editing and Proofreading Documents: Making Changes to document – Inserting Saved Text – Finding the Most Appropriate Word – Reorganizing a Document Outline – Finding and Replacing Text – Correcting Spelling and Grammatical errors – Finalizing Document.

Unit II: MS Word

Changing the Look of Text: Quickly Formatting Text and Paragraphs – Manually changing the look of characters – Manually changing the look of paragraphs – Creating and modifying Lists-Presenting Information in Columns and Tables : Presenting Information in Columns – Creating Tabular List –Presenting Information in a Table – Formatting Table Information – Performing Calculations in a Table- Using a Table to control Page Layout.

Unit III: MS Excel

Setting Up a Workbook : Creating Workbooks – Modifying Workbooks - Modifying Worksheets – Working with Data and Data Tables : Entering and Revising Data – Moving Data within a Workbook- Finding and Replacing Data – Correcting and Expanding Upon Worksheet Data – Defining a Table – Performing Calculations on Data : Naming Groups of Data – Creating Formulas to Calculate Values – Summarizing Data that meets Specific Conditions –Finding and Correcting Errors in Calculations- Changing Document Appearance.

Unit IV – MS Access

Creating a Database –Creating a Database from a template, Manually - Simplifying Data Entry by Using Forms : Creating a form –changing the arrangements – Adding controls – Entering Data in a form –Adding Sub form to a form – Locating Specific Information : Sorting Information in a Table – Filtering Information – Locating Information that matches Multiple Criteria – Creating a Query – Performing Calculations.

Unit V: MS PowerPoint

Starting a New Presentation – Working with Slide Text : Entering Text – Editing Text – Adding and Manipulating Text Boxes –Correcting and Sizing text – Checking Spelling – Finding and replacing text and fonts – Changing the size, Alignment, Spacing – Adjusting the Slide Layout, Order and Look : Changing the Layout of a slide – Rearranging Slides in a Presentation – Applying a theme -Switching to a Different Color Scheme – Adding Shading and texture to the background of a slide – Delivering a Presentation Electronically.

Text Book:

Step by Step 2007 Microsoft Office System -Joyce Cox, Curtis Frye, M.Dow Lambert III , Steve Lambert ,Joan Preppernau and Katherine Murray

DEPARTMENT OF CRIMINOLOGY AND CRIMINAL JUSTICE

PERSONAL EFFECTIVENESS AND EFFICIENCY

Unit I. Self Concept and Self Esteem

Defining terms:- self-concept- self-esteem *Factors influencing self-esteem-* body image and self-image- level of maturity- environmental and social factors (Eg school environment)- *Developing self-esteem-* strategies for building self-esteem- strategies for supporting the self-esteem of others

Unit II. Effective communication skills

Types of communication: - verbal, non-verbal, mass media- intentional and unintentional communication *Importance of effective communication-* getting message understood implementation of ideas and plans *Barriers to effective communication-* assuming clarity of message and correct interpretation of message- cultural differences- distance- passive listening- lack of clarity and feedback *Improving the effectiveness of communication* increasing sensitivity to feelings and body language - practicing communication skills - avoiding barriers

Unit III. Recognition of differences in others

Recognition of differences in others - values, beliefs, behaviours, feelings, appearances, religions, backgrounds, environments, abilities, levels of health, gender stereotypes *Attitudes and reactions to various individuals and groups in society* – empathy – tolerance – sensitivity - respect- prejudice – discrimination - hate-based violence *Disabilities* - types of disabilities (eg environmental, genetic, sensory) - adjusting to disabilities - community attitudes towards people with disabilities *Reasons for forming particular attitudes*

Unit IV. Stress Management

Defining stress: Sources of stress - physical - environmental - vocational- emotional - social - life crises (eg death of family member or friend, family breakdown) - abuse (physical, emotional and social) *Assessing levels of stress* - signs and symptoms of stress - positive aspects of stress - negative aspects of stress *Coping mechanisms* - fight or flight response *Stress management techniques* - time management – relaxation - assertiveness training – meditation - resolving conflict - enhancing self-esteem - self expression and creativity through movement - maintaining fitness - hobbies, recreation and leisure activities

Unit V. Goal Setting

Types of goals - long term and short term goals - personal and externally imposed goals individual vs. group goals *Important life goals* - goals related to family, marriage and parenting - career choices – relationships *Steps in goal setting* - define the goal - identify strategies - consider possible blocks and ways to deal with them - outline the steps - set deadlines *Priorities in goal setting Failure and success in goal setting* - contributing factors - responses to personal failures and successes

RECOMMENDED READINGS

1. Johnson, D. (1997) *Reaching Out: Interpersonal Effectiveness and Self-Actualisation*. (6E) London: Allyn and Bacon.
2. Belbin, M. (1998) *Team Roles at Work*. London: Heinemann.
3. De Bono, E. (1995) *Seriously Creative*. London :Harper Collins
4. Covey, S (1993) *Seven Habits of Highly Effective People*. New York : Simon Schuster.

DEPARTMENT OF ECONOMICS

M.A. Economics

Environmental Economics

UNIT-I INTRODUCTION TO ENVIRONMENTAL ECONOMICS

Introduction to environmental economics, Importance of Environmental Valuation- Assigning Monetary Value – Problems of Monetization – Market failure, and property rights, open access resources, collective action.

UNIT-II SOURCE AND TYPES OF POLLUTION

Sources and types of pollution (air, water, solid waste, noise, land degradation); Cause and effects of environmental degradation, Urban and Rural environmental problems, Energy-environment interaction.

UNIT – III MARKET AND NON-MARKET VALUATION

Market and non-market valuation; Physical linkage methods; Abatement cost methods; Behavior linkage methods - Revealed and stated preference; Social cost benefit analysis; Environmental impact assessment.

UNIT – IV ENVIRONMENTAL POLICY

Evolution of Environmental Policy in India; Air and Water Acts; Fiscal incentives; Enforcement and Implementation issues, Case studies on pollution Control in India and other countries

UNIT – V CLIMATE CHANGE AND DIFFERENT PROTOCOLS

Transboundary pollution, economics of global warming, Different International Protocols, Causes and consequences of ozone depletion and Climate change, Rio conference (Agenda 21); Protocols relating to Climate Change; Food Security; Ozone depletion and Economics of Biodiversity.

Basic Readings List:

- Hanley, N, J. F. Shogren and B. White. Environmental Economics in Theory and Practice. New York: MacMillan, 1997.
- Arrow, K. J. and Scitovsky, T. Readings in Welfare Economics - Part III. Richard Irwin Inc, 1969.
- Bromely, D. W. (ed.). Handbook of Environmental Economics. Blackwell, 1995.
- Jempa, C. and Munasinghe, M. Climate Change Policy: Facts, Issues and Analyses. Cambridge: Cambridge University Press, 1998.
- Baumol, W. J. and Oates, W. E. The theory of environmental policy. Cambridge: Cambridge University Press, 1988.
- Dixon, J. Economic Analysis of Environmental Impacts. London: Earthscan Publications, 1994.

- Freeman III, A. M. *The Economic Approach to Environmental Policy*. Cheltenham, U.K.: Edward Elgar, 1998.
- Mehta, S.; Mundle, S. and Sankar, U. *Incentives and regulation for pollution control*. Sage Publishers, 1997.
- United Nations. *Accounting and Valuation of Environment, Vol. I and II: A primer for developing countries*, New York: ESCAP, 1997.
- Nick Hanley, J. F. Shogren and White, *The theory of environmental economics and policy*.

Additional Readings List:

- Coase, R. H. "The Problem of Social Cost", in Breit, W. and Hochman, H.M. (eds.) *Readings in microeconomics*. Rinehart and Winston Inc., 1968.
- Cropper, M. L. and Oates, W. E. "Environment economics: A survey". *Journal of Economic Literature*, June 1992.
- Dasgupta, P and Heal, G. M. *Economic Theory and Exhaustible Resources*. Cambridge: Cambridge University Press, 1979.
- Field, B. C. *Environmental economics: an introduction*. New York: McGraw Hill, 1994.
- Fisher, A. C. "Environment and resource economics", in Oates, W.E. (ed.) *New horizons in environmental economics: selected readings*. Cheltenham, U.K.: Edward Elgar, 1995.
- Hardin, G. "The tragedy of commons", in Markandya, A. and Richardson, J. (eds.) *Earthscan reader in environmental economics*. London: Earthscan Publications, 1993.
- Oates, W. E. *Economics of the environment*. Cheltenham, U.K.: Edward Elgar, 1992.
- Perrings, Charles. "Ecological resilience in the sustainability of economic development", in Sylvie, F., Pearce, D., and Proops, J. (eds.) *New horizons in environmental economics: model of sustainable development*. Cheltenham, U.K.: Edward Elgar, 1996.
- World Bank. *Development and the environment*. World Development Report series. Washington, D. C.: World Bank, 1992.
- Georgiou, S., Whittington, D., and Pearce, D. *Economic Values and the Environment in Developing World*. Cheltenham, U.K.: Edward Elgar, 1997.
- Bohm, P. and Russell, C. "Comparative analysis of alternative policy instruments", in Allen Kneese, V. and Sweeney, J.L. (eds.) *Handbook of natural resource and energy economics*. North Holland, 1985.
- Maler, K. G. "International environmental problems", in Markandya, A. and Richardson, J. (eds.) *Earthscan reader in environmental economics*. London: Earthscan Publications, 1993.
- Government of India. *Policy statement for abatement of pollution*. New Delhi: Ministry of Environment and Forests, Government of India, 1992.
- Opschoor, J. B. and Vos, H. B. *Economic instruments for environmental protection*. OECD and OCDE, 1989.
- Sankar, U.; Mythili, G. and Anuradha, R. *Environmental problems in India's energy sector and policies for corrective action (Project Report)*. Chennai: Madras School of Economics, 1996.
- (Students are encouraged to read the annual reports and ENVIS newsletters of the Central Pollution Control Board.)

- Hanley, N, J. F. Shogren and B. White. Environmental Economics in Theory and Practice. New York: MacMillan, 1997.
- Arrow, K. J. and Scitovsky, T. Readings in Welfare Economics - Part III. Richard Irwin Inc, 1969.
- Bromely, D. W. (ed.). Handbook of Environmental Economics. Blackwell, 1995.
- Jempa, C. and Munasinghe, M. Climate Change Policy: Facts, Issues and Analyses. Cambridge: Cambridge University Press, 1998.
- Baumol, W. J. and Oates, W. E. The theory of environmental policy. Cambridge: Cambridge University Press, 1988.
- Dixon, J. Economic Analysis of Environmental Impacts. London: Earthscan Publications, 1994.
- Freeman III, A. M. The Economic Approach to Environmental Policy. Cheltenham, U.K.: Edward Elgar, 1998.
- Mehta, S.; Mundle, S. and Sankar, U. Incentives and regulation for pollution control. Sage Publishers, 1997.
- United Nations. Accounting and Valuation of Environment, Vol. I and II: A primer for developing countries, New York: ESCAP, 1997.
- Nick Hanley, J. F. Shogren and White, The theory of environmental economics and policy.
- Coase, R. H. "The Problem of Social Cost", in Breit, W. and Hochman, H.M. (eds.) Readings in microeconomics. Rinehart and Winston Inc., 1968.
- Cropper, M. L. and Oates, W. E. "Environment economics: A survey". Journal of Economic Literature, June 1992.
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- Field, B. C. Environmental economics: an introduction. New York: McGraw Hill, 1994.
- Fisher, A. C. "Environment and resource economics", in Oates, W.E. (ed.) New horizons in environmental economics: selected readings. Cheltenham, U.K.: Edward Elgar, 1995.
- Hardin, G. "The tragedy of commons", in Markandya, A. and Richardson, J. (eds.) Earthscan reader in environmental economics. London: Earthscan Publications, 1993.
- Oates, W. E. Economics of the environment. Cheltenham, U.K.: Edward Elgar, 1992.
- Perrings, Charles. "Ecological resilience in the sustainability of economic development", in Sylvie, F., Pearce, D., and Proops, J. (eds.) New horizons in environmental economics: model of sustainable development. Cheltenham, U.K.: Edward Elgar, 1996.
- World Bank. Development and the environment. World Development Report series. Washington, D. C.: World Bank, 1992.
- Georgiou, S., Whittington, D., and Pearce, D. Economic Values and the Environment in Developing World. Cheltenham, U.K.: Edward Elgar, 1997.
- Bohm, P. and Russell, C. "Comparative analysis of alternative policy instruments", in Allen Kneese, V. and Sweeney, J.L. (eds.) Handbook of natural resource and energy economics. North Holland, 1985.
- Maler, K. G. "International environmental problems", in Markandya, A. and Richardson, J. (eds.) Earthscan reader in environmental economics. London: Earthscan Publications, 1993.
- Government of India. Policy statement for abatement of pollution. New Delhi: Ministry of Environment and Forests, Government of India, 1992.
- Opschoor, J. B. and Vos, H. B. Economic instruments for environmental protection. OECD and OCDE, 1989.
- Sankar, U.; Mythili, G. and Anuradha, R. Environmental problems in India's energy sector and policies for corrective action (Project Report). Chennai: Madras School of Economics, 1996.
- (Students are encouraged to read the annual reports and ENVIS newsletters of the Central Pollution Control Board.)

DEPARTMENT OF EDUCATION

GUIDANCE AND COUNSELLING (ASAED)

Objectives:

After completing the course, the student will be able to -

- Understand the basic principle of guidance and counseling
- Understand and make use of the approaches of counseling
- Know the different areas of Guidance
- Apply the approaches of guidance in life situations
- Understand the concept of mental health and psychodynamics of adjustment
- Knows the difference techniques for collection of information
- Develop skills in organizing guidance and counseling service in schools

Unit I - The Concept of Guidance

Meaning, nature and scope of guidance -Philosophical, psychological and sociological bases of guidance - Need and importance of guidance services in colleges. History of Guidance movement – conceptual development of guidance in India – Status of guidance services in India.

Unit II - Areas and Techniques of Guidance

Types of Guidance – Educational, Vocational and Personal Guidance. Health Guidance and Social Guidance – purpose and functions - Individual and group guidance. Individual and group techniques -Use of tests in guidance – intelligence, achievement and - personality tests

Unit III - The Concept of Counselling

Meaning, nature and scope of counselling - Different approaches of counselling(directive, client centered and eclectic) - Various steps of counselling - Qualities of a good counsellor - Comparison of guidance and counseling

Unit IV - Counselling Tools, Techniques and Problems

Sociometric test, Interest inventories, aptitude tests, case study, Observation and interview - Dealing with problems like - aggression, lying, depression, alcoholism, drug addiction and learning problems

Unit V - Organization of Guidance and Counseling Services

Guidance and counseling programme - Essential activities of a good guidance programme, Role of guidance personnel, Counsellor and psychologist

References

- Bhave, Swati, A. & Saini, Sunil. (2009). *Anger management*. New Delhi: Sage Publications.
- Chandra, Ramesh. (2005). *Career information & guidance and counselling*. Delhi: ISHA Books.
- Dash. (2005). *Educational measurement statistics & guidance services*. Coimbatore: Global Books Syndicate.
- Dash. (2005). *Guidance services in schools*. Coimbatore: Global Books Syndicate.
- Frank, A. Nugent. (1990). *An introduction to the profession of counselling*. London: Merrill Publishing Company.
- Gibson, Rebort L. & Mitchell, Marianne, H. (2006). *Introduction to counselling and guidance* (6th ed.). New Delhi: Prentice Hall of India.
- Gillon, Ewan. (2007). *Person-centered counseling psychology: An introduction*. Chennai: Sage Publications.
- Gupta, Sarla (Ed.). (2005). *Career and counselling education*. New Delhi: Kalpaz Publications.
- Kumar, Yogesh. (2005). *Guidance and counselling*. New Delhi: APH Publishing Corporation.
- Mary, Vishala, SND. (2008). *Guidance and counselling*. New Delhi: S. Chand & Company.
- Mishra, R.C. (2004). *Guidance and counseling*. New Delhi: APH Publishing Corporation.

- Munju, Gupta. *Effective Guidance & Counseling-Modern Methods and Techniques*. Chennai: Tamil Nadu Book House.
- Pandey, V.C. (2005). *Educational guidance and counselling*. Delhi: Isha Books.
- Qureshi, Hasnain. (2005). *Educational guidance*. New Delhi: Anmol Publications.
- Rao, (2005). *Guidance & counseling*. Global Books House.
- Sharma, R.A. *Fundamentals of Guidance & counseling*. Meerut: Surya.
- Sinds, Yogesh, Kumar. (2005). *Guidance and career counselling*. New Delhi: APH Publishing Corporation.
- Veliappan, A. & Amirtharaj, Vijay K. (2009). *Guidance and counseling*. Tirunelveli: A.V. Parvathi Publication.

Department of English

English for Competitive Examination

Objectives:

- To introduce the aspects of the traditional grammar to the learners.
- To train the learners with compositional / comprehension passages.

Unit I

- a) Nouns, Articles, Prepositions, Conjunctions and Adjectives

Unit II

- a) Verbs – Tenses, Concord, Verbal Clause, Adverbs

Unit III

- a) Phrases and Clauses – Nominal, Verbal, Adverbial, Adjectival, Conjunctional

Unit IV

- a) Speech, Voice, Degrees of Comparison

Unit V

- a) Composition – Note making, Comprehension, Precise Writing

Note: Testing for this Paper will be made as follows:

Unit I, II & III – Either fill in the gaps, or Spot the errors,

or Match the following

Units IV & V – Written

References:

1. CSR publications
2. Language & Literature Vol. II, Appendix, MSU Publications
3. David & Green.

DEPARTMENT OF GEO-TECHNOLOGY

M.Sc. Applied Geophysics

GPS Technology

Unit I : History of the Global positioning system – Development of Global surveying Techniques – Over view of GPS – Reference system.

Unit II : Satellite orbits : orbit description – orbitdetermination – orbitdissemination.

Unit III : Satellite signal : signal structure – signal processing.

Unit IV : Observative : Data acquisition – Data combinations – Atmospheric effects – Relative effects – multipath.

Unit V: GPS survey – planning – surveying procedure – Insitu data processing – Application of GPS – survey report.

Reference Books

1. B.Hofmann – wellenhof, H.Llchfenegga and J.Collins; GPS theory and practice –Springer,2007.
2. Ackroyd.N, Lorimer.R. ; Global Navigation – a GPS user’s guide – Lloyds of London, 1990.
3. Kanla,W.M. Theory of satellite geodesy Blaisdell, Toronto,1966.
4. Logsdon.T. The NAVSTAR Global Positioning system. Van Nostrand , Rein hold, NewYork,1992.

DEPARTMENT OF HISTORY

M.A. History

1. History of Europe (1789 – 1945 C.E)

UNIT I : Europe in 1789 – French Revolution – Causes Course and Results – Napoleon Bonaparte – Administration – Wars – continental system – Defeat and Decline. The Congress of Vienna – Its achievements – The Holy Alliance – Concert of Europe – Revolution of 1830 – Revolution of 1848 – Napoleon III – Foreign Policy. The Third Republic of France.

UNIT II: National Movements in Europe – Unification of Italy and Germany – Bismarck – Career and Achievements. The Eastern Question – The Greek War of independence – the Crimean War – The Russo – Turkish War and the Congress of Berlin – Young Turk movement – the Balkan wars.

UNIT III: European Alliances – the Triple Alliance and the Triple Entente – Out break of I World War – First World War – Course and Results – Peace of Paris – League of Nations.

UNIT IV: Locarno Pact – Kellog Briand Pact – Russian Revolution – Fascist Italy – Mussolini – Wemiar Republic and its failure Nazi Germany – Turkey under Mustafa Kamal Pasha.

UNIT V: Rise of Axis Powers – Munich Pact – Germany’s aggression – II World War – Causes, Course and Results – U.N.O. Europe after the Second World War – Cold War – Various Alliances in West and East Europe – European Common Market – Domination of the two super powers in Europe.

BOOKS FOR REFERENCE:

1. G.W. Southgate: A Text book of Modern European History 1789 – 1960.
2. Grand and Temperly: Europe in the 19th and 20th Centuries.
3. C.D.M. Kateby : History of Modern Europe.
4. Raghbir Dayal: History of Europe.
5. Stephen J. Lee: Aspects of European History 1789 – 1990.

DEPARTMENT OF CITE

M.Sc. Information Technology

Office Automation

UNIT I

Windows XP: Windows concepts, Features, Windows Structure, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin, Windows Accessories- Calculator, Notepad, Paint, Wordpad, Character Map, Windows Explorer, Entertainment, Managing Hardware & Software Installation of Hardware & Software, Using Scanner, System Tools, Communication, Sharing Information between programs.

Word Processing; MS Word: Features, Creating, Saving and Opening Documents in Word, Interface, Toolbars, Ruler, Menus, Keyboard Shortcut, Editing, Previewing, Printing, & Formatting a Document, Advanced Features of MS Word, Find & Replace, Using Thesaurus, Using Auto- Multiple Functions, Mail Merge, Handling Graphics, Tables & Charts, Converting a word document into various formats like- Text,

Rich Text format, Word perfect, HTML, PDF etc.

UNIT II

Worksheet- MS-Excel: Worksheet basics, creating worksheet, entering into worksheet, heading information, data, text, dates, alphanumeric values, saving & quitting worksheet, Opening and moving around in an existing worksheet, Toolbars and Menus, Keyboard shortcuts, Working with single and multiple workbook, working with formulae & cell referencing, Auto sum, Coping formulae, Absolute & relative addressing, Worksheet with ranges, formatting of worksheet, Previewing & Printing worksheet, Graphs and charts, Database, Creating and Using macros, Multiple worksheets- concepts, creating and using.

UNIT III

MS Power Point: Creating slide show with animations. Auto center Wizard, creating a lank presentation, auto layout, Power point screen: screen layout and Views, insert a new slide, applying design template, changing slide layout, reordering and hiding slides, slide show and editing custom slide. Resizing a text box ,Text box properties, Delete a text, Bulleted lists, Numbered lists, Adding notes, Video and Audio, Adding text Editing options, Formatting text, Replace fonts, Line spacing ,Change case Spelling check, Color schemes , Adding clip art, Adding an image from a file Editing graphic, AutoShapes, WordArt, Backgrounds, Action buttons, Slide animation, Animation preview, Slide transitions, Slide show options, Slide master, Header and footer, Slide numbers, Date and time,

UNIT IV

Database Management & MS ACCESS

Database Basics: Databases, Records. Fields, data types, Database Types · Library Catalogues Introduction into Microsoft Access, Starting Up Microsoft Access, Creating New, and Opening Existing Databases, Creating a database using a wizard, Creating a database without using a wizard, Tables - What they are and how they work, Create a table from scratch in Design view, Primary Keys, Switching Views, Entering Data, Manipulating Data, Advanced Table Feature Examples, Relationships - How to link multiple tables together, Forms - What they are and how they work, Creating A Form Using A Wizard, Reports - What they are and how they work, Creating A Report Using A Wizard, Creating Mail Merge Labels using a Wizard

UNIT V

Intranet & E-governance

Intranet tools: E-mail: Anatomy of e-mail, e-mail address, finding e-mail address, adding signature, attaching files, opening attachments, managing e-mail account, Web mail,

Case study: Yahoo Mail, Outlook express. FTP, ftp commands, ftp software, Telnet, using telnet, Web pages, HTML, basics of HTML. MS Front page: Page Properties, Text, Hyperlinks, Tables, Graphics and Pictures, Miscellaneous, Shared borders, Navigation bars, Cascading Style Sheets, Themes, Frames, Components, Forms, create web site. Uploading and downloading files. Portals, creating portals, digital signature, computer virus and antivirus software

Reference Books

- Professional Office Procedure by Susan H Cooperman, Prentice Hall
- Information Technology: Principles , Practices and Opportunities by James A Senn, Prentice Hall
- Technology And Procedures for Administrative Professionals by Patsy Fulton-Calkins, Thomson Learning
- Public Information Technology and E-Governance: Managing the Virtual State (Paperback) by G. David Garson

DEPARTMENT OF MANAGEMENT STUDIES

M.B.A.

Managerial Skill Development

UNIT I

Introduction to Basic Managerial skills, Classification of skills like Intra personal and Interpersonal skills – Balancing Work and Life, Managing Time and Managing Change.

UNIT II

Thinking Creatively, Communicating Clearly and Making Presentations

UNIT III

Selling Successfully, Marketing Effectively, Influencing People

UNIT IV

Delegating, Managing People, Motivating People

UNIT V

Managing Teams, Effective Leadership and Achieving Excellence

REFERENCE:

1. *McGrath SJ, EH*, Basic Managerial Skills, Prentice Hall India
2. *Rajasekaran B*, Winner's Mantra,
3. The Winner's Manual – The Essential and Life and Work Skills, DK Publishers

CENTRE FOR MARINE SCIENCE & TECHNOLOGY

M.SC. MARINE BIOTECHNOLOGY

Research Methodology

- Unit I : What is research? – Literature Collection – Literature citation – Research report – Manuscript preparation – Formatting and typing – Experimental designs – Laboratory safety – Intellectual property rights.
- Unit II : Microscopy – Principle of light transmission. Types of light microscopes – Bright field – Dark field – phase contrast – Fluorescence – Polarisation – Confocal – Scanning Micrometry. Electron Microscopes and types – Scanning probe microscopes – Scanning tunnelling – Atomic force and magnetic force microscope – Photomicrography.
- Unit III : Centrifugation – Principles and types. pH meter – Principles and types. Cytotechniques – Cryopreservation – Freezing microtome – Freeze drying for physiologically active substances.
- Unit IV : Chromatography – Paper – Thin layer – Column – Gas – Liquid chromatography. Electrophoresis – Moving boundary – Paper – Cellulose acetate – Gel – Immunoelectrophoresis. Southern – Northern – Western Blotting.
- Unit V : Spectrophotometer – Fluorimeter – Chemiluminometer – ESR – NMR Spectrophotometer – MRI Atomic Spectroscopy – Flame emission photometry – Radioactive counter.

M.SC. MICROBIOLOGY

Marine Natural Products

- Unit I : Identification of organisms containing bioactive compounds.
- Unit II : Important products isolated from marine organisms and their uses –Agarose, agar, alginates, carrageenans, chitin, chitosans and glucosaminins.
- Unit III : Marine enzymes and lipids, Lectins, Heparin and Carotene
- Unit IV : Other by-products from marine organisms : fish meal, silage products, FPC, Fish hydrolysate, fish flakes, fish glue, pearl essence, fish peptones.
- Unit V : Pharmaceutically important products from marine organisms - antimicrobial compounds, hormone like materials, b-carotene, PUFA products, vitamins, Anticancer and cytotoxic compounds.

References

1. Fish resources of the ocean – J. A. Gulland, Fishing News (Books) Ltd., England, 1971.
2. Marine Biodeterioration, Mary Francis Thomson (Ed.) Rachakohda, Qford & IBM Publishing Co. Pvt. Ltd., New Delhi.
3. Pharmaceutics and the sea, Jefford, Rinehart, Sheld. Technomic Publishing Co., AG Pennsylvania, USA, 1988.
4. Fish and Fish products (A. L. Winton, BK. B. Winton), 1997 – Allied Scientific Publishers, Vyas Nagar, Bikaner.
5. Fishery by-products (CIFT Manual) – CIFT Publications, Cochin, India.

DEPARTMENT OF MATHEMATICS

1. Numerical Methods

Unit I: Introduction: Errors in numerical calculations – Mathematical preliminaries – Solution of Algebraic and Transcendental equations: The Bisection method – The method of false position.

Unit II: Newton - Raphson method – Introduction – The Iteration method – Muller's method – Graffes' root squaring method

Unit III: Interpolation: Newton's Formulae for interpolation – Central difference interpolation formulae.

Unit IV: Numerical Differentiation and integration: Numerical differentiation – Numerical integration

Unit V: Matrices and Linear systems of equations: Solution of Linear systems – Iterative methods - The Eigen value problem

Text Book: Introductory Method of Numerical Analysis (Third Edition) by S.S. Sastry, Sections 1.3, 2.1 to 2.5, 2.7, 2.8, 3.6, 3.7, 5.2, 5.4(5.4.1 to 5.4.3 only), 6.4 and 6.5.

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

M.Sc. Organic chemistry

Pharmaceutical Analysis

UNIT-I

Significance of Quantitative analysis in quality control – Isolation and identification of drugs – Different techniques of analysis – Significant figures – Fundamentals of volumetric analysis – Methods of expressing concentration – Primary and secondary standards – Acid base concepts – Relative strength of acids and bases – Law of mass action – Common ion effect – Ionic product of water, pH, Henderson – Hesselbach equation – Buffer solutions – Neutralisation curves – Acid-base indicators and their choice.

UNIT-II

a) Oxidation – Reduction Titrations: Theory and Pharmaceutical applications – Strength and equivalent weights of oxidizing and reducing agents – Titrations involving Potassium Permanganate, Potassium iodate, Potassium bromate, ceric ammonium sulphate – Iodimetry and Iodometry.

b) Precipitation Titrations: Principles – Titrations involving mercuric nitrate, ammonium or Potassium thiocyanate, barium sulphate – Argentometric titrations

UNIT-III

a) Gravimetric analysis: Basic concepts – Precipitation techniques – co-precipitation- post-precipitation – Various steps involved in gravimetric analysis and their pharmaceutical applications.

b) Complexometric titrations: Complexation and chelation – Werner's coordination number – stability of complexes, titrants and titrations curves – Types of complexometric titrations and methods of end point detection.

c) Non- aqueous titrations: Theoretical consideration – Scope and limitations – titration of weak acids, weak bases.

UNIT – IV Physical Methods:

Electrophoresis, Refractive index, Kjeldahl method of nitrogen estimation, Flame photometry – Kinematic viscosity.

UNIT –V Chromatographic Techniques:

Introduction – Classification of Chromatographic techniques – adsorption and partition – Principles and application of TLC, HPTLC, Paper Chromatography – ascending and descending – Gas Chromatography.

REFERENCES

1. Clarke, Isolation and Identification of drugs, the Pharmaceutical Press, 1986.
2. Vogel's Text Book of Quantitative Chemical Analysis by J. Mendham, R.C. Denney, J.D. Barnes and MJK Thomas ELBS, 7th Edn., 2005.
3. H.H. Willard, L.L. Merritt, J.A. Dean and F.A. Settle, Instrumental Methods of Analysis, Wadsworth Publishing Company; 7 Sub edition, 1988.
4. David Harvey, Modern Analytical Chemistry, Mc Graw Hill. 1999.
5. H. Gerhard Vogel, Drug Discovery and Evaluation-Pharmacological Assays, 2nd Edn. Springer, 2008.
6. E. Heftmann, A Laboratory Handbook of Chromatographic and electrophoresis methods, 3rd Edn, Van Nostrand Reinhold, 1975.
7. Raymond PW Scott, Techniques and Practice of Chromatography. 1st Edn, Marcel Dekker Inc., 1995.
8. P.D. Sethi, Identification of Drugs and Pharmaceutical Formulations by Thin Layer Chromatography, 2nd Edn, CBS Publishers & Distributors, 2008.
9. James M. Bobbitt, Thin Layer Chromatography, Reinbold pub. Corp., Chapman and Hall, London, 2007.
10. P.D. Sethi, HPTLC – Quantitative Analysis of Pharmaceutical Formulations, 3rd Edn, CBS Publishers & Distributors, 2008.

DEPARTMENT OF PHYSICS

M.Sc. Physics

Electronics in Daily Life

UNIT I : Fundamentals

Electrical and Electronic Symbols Resistors – Capacitors – Resistance wale – Capacitor wale – Electrical quantities – Electrical formulas – Magnetism – Meters – Fuse wire Transistors – Integrated chips

UNIT II : Electrical appliances

Switch board – Main box – Metal circuit breakers (MCB) – AC – DC currents – Two Phase – Three Phase electrical connections – generators – un intrepid power supply (UPS)- stabilizer – voltage regulators – Electrical devices – Iron box – Fan

UNIT III: Electronic home appliances

Radio – Audio taper veaulem, speaker- televisions – VCR – CD Players – DVD – calculators – Computers – Block diagram of a Computer – Input Device – Memory Device – control Unit – Arithmetic logic unit – Output device – Microprocessor – RAM – ROM - scanner – Printer – Digital Camera – LCD Projectors – Display devices

UNIT IV: Communications Electronics

Principles of optical fiber Cables (OFC) – Telephone – Mobile phones – wire less phone - Antenna - Internet - Intranet

UNIT V: Safety Mechanism

Handling Electrical appliances - Power saving methods - Hazards Prevention Methods - Protection of Hi –Fi- electronic devices.

Books for Study and references:

1. S.S. Kamble – Electronics and Mathematics Data book – Allied publishers Ltd – 1997
2. William David Cooper, electronic Instrumentation and Measurement Technique (2nd Edition)

DEPARTMENT OF PSYCHOLOGY

M.Sc. Psychology

Positive Psychology

UNIT I: INTRODUCTION

Definition – Assumptions and Goals – From the negative to the positive – View of human functioning - Eastern and western perspectives – Classifications and measures of strengths and positive outcomes

UNIT II: POSITIVE PSYCHOLOGY IN CONTEXT

Developing strengths and living well –Meaning and measure of happiness – Subjective Well Being – Self-Realization – Views of Happiness

UNIT III: POSITIVE EMOTIONAL STATES & PROCESSES

Principles of pleasure: Understanding positive affect, positive emotions and well-being: Positive Emotions and Health Resources – Positive Emotions and Well – Being - Emotion-focused coping – Emotional Intelligence

UNIT IV: POSITIVE COGNITIVE STATES & PROCESSES

Self-Efficacy, Optimism and Hope – Wisdom and Courage: the two universal virtues – Mindfulness, Flow and Spirituality

UNIT V: PROSOCIAL BEHAVIOUR& POSITIVE ENVIRONMENTS

Empathy and Egotism: Altruism – Gratitude – Forgiveness – Societal implications – Attachment, Love and Flourishing relationships

Positive Schooling –Gainful Employment – Building better communities – Life above Zero

TEXT BOOKS

1. Snyder, C. R., Lopez, S. J., &Pedrotti, J. T. (2010). Positive Psychology: The scientific and practical explorations of human strengths. 2nd ed. Sage Publications, India.
2. Baumgardner, S. R., & Crothers, M. K. (2009). Positive Psychology. Pearson Education, India.

DEPARTMENT OF RENEWABLE ENERGY SCIENCE

EXTRA DEPARTMENT COURSE

(Course offered by Dept. of Renewable Energy Science)

SOLAR ENERGY CONVERSION TECHNOLOGIES

Theory: 50 marks

Duration: 2 hrs

Unit-I:

Introduction: Energy - Form of Energy - Natural Energy Sources - Non Conventional and Conventional Energy Sources.

Unit-II:

Solar Energy Conversion: Solar Energy Conversion Devices - Solar Hot Water System -Solar Cooker - Solar Still - Solar dryer - Solar panels - Operation and Maintenance.

Unit-III:

Measuring Devices: Solar radiation - Sun meter - Solar insolation and Power - Solar Time - Reflectivity of Surfaces - Use of Multi detectual meter - Power estimation - Contactless Thermometer - Temperature measurement - Efficiency of the thermal electrical system.

Practical: 50 marks

Duration: 3 hrs

1. Measurement of Efficiency of a Box Type Solar Cooker.
2. Solar Still and Estimation of Efficiency.
3. Estimation of Efficiency of Solar Hot Water System.
4. Estimation of I-V curve for a Solar Cell and Estimation of Cell Efficiency.
5. Estimation of Power Configuration of Various Loads.

References:

1. G. D. Rai, Non - Conventional Energy Sources, Khanna Publishers, New Delhi, Fifth Edition, 2012.
2. D. P. Kothari, K. C. Singal & Rakesh Ranjan, Renewable energy sources and emerging Technologies, Prentice Hall of India pvt. Ltd., New Delhi, 2008.
3. Chetan Singh Solanki, Solar Photovoltaic technology and Systems, PHI learning Pvt. Ltd., 2013.

DEPARTMENT OF SOCIOLOGY

M.A. Sociology

1. Organizational Behaviour

Unit I: Introduction

Organizational Behaviour: Definition. Key elements. Uses of the study of organizational behaviour. Basic approaches.

Unit II: GROUP DYNAMICS

Interacting situation in work place:

Types of group interaction - Meetings and Team work. Dynamics of group formation in interactional contexts.

Types of groups: Formal and Informal – characteristics.

Informal Groups: Conditions for formation. Functions.

Group Norms: Characteristics. Functions. Enforcement of group norms.

Group Cohesiveness: Sources, Maintenance and Consequences of group cohesion.

Unit III: LEADERSHIP

Leadership: Meaning, Nature, Traits, Styles and Functions.

Unit IV: COMMUNICATION

Communication: Definition. Need. Steps in the communication process.

Forms of communication: Downward, Upward, Horizontal.

Barriers to communication and Overcoming the barriers.

Informal communication: Positive and negative aspects of informal communication.

Rumour: Nature. Conditions under which rumour occurs. Controlling rumour.

Unit V: CONFLICT

Conflict: Meaning, Process, Levels and Effects. Resolution of conflict-Strategies to be adopted at each level.

Books for Reference :

1. Luthans, Fred. **Organizational Behaviour**. New York: McGraw – Hill Publishing Company, 1989.
2. Davis, Keith: **Human Behaviour at work: Organizational Behaviour**. New Delhi: Tata McGraw –Hill Publishing Company, 1981.
3. Robbins, Stephen P. **Organizational Behaviour – Concepts, Controversies and Applications**. New Delhi: Prentice – Hall of India, 1989.
4. Chung, Kae H. and Megginson, Leon C. **Organizational Behaviour – Developing Managerial Skills**. New York: Harper & Row, 1981.
5. Herbert, Theodore T. **Dimensions of Organizational Behaviour**. New York: Macmillan, 1976.
6. Gray, J.L., and Strake F.A. **Organizational Behaviour - Concepts and Applications**. Columbus: Merrill Publishing Company, 1988.
7. Kelly, Joe. **Organizational Behaviour – Its Data, First Principles and Applications**. New Delhi: Surjeet Publications, 1987.
8. Aswathappa, K. **Organizational Behaviour**. Bombay: Himalaya Publishing House, 1991.

Department of Statistics

8. ADVANCED STATISTICAL METHODS (KSHV)

UNIT I

Basic operations of matrix - Determinant and inverse of matrices - Idempotent matrix - solutions of simultaneous equations - Univariate normal distribution and its extension to multivariate normal (non-singular case only) distribution and its properties - estimates of parameters - inference about populations mean vector.

UNIT II

Multiple correlation - relationship with simple correlations - tests of significance of multiple correlation - multiple regression - interpretation of SPSS outputs regarding fitting of multiple linear regression model and computation of multiple correlation co-efficient.

UNIT III

Classifications of two populations - General classification problem - Fisher's discriminant function - Principal components - properties - finding first principal component - iterative methods.

UNIT IV

Factor analysis - Orthogonal factor model - factor rotation and inference - Clustering - similarity measure - Hierarchical clustering methods, Canonical variable and canonical correlation.

UNIT V

Principles of experiments - CRD, RBD and LSD - Basic ideas of factorial experiments - concept of hierarchical model - Non-parametric methods - chi-square test - sign test - Wilcoxon test - Run test - Mann - Whitney test.

Note:

No derivation of the results required. Importance will be given only to application and understanding of the concepts.

BOOKS FOR STUDY:

1. Cochran, W.G. and Cox, G.M. (1975): Experimental designs, John Wiley & Sons.
2. Dunteman, G.H. (1984): Introduction to Multivariate Analysis, Sage Publications, New Delhi.
3. Rencher, A.C. (2003): Methods of Multivariate Analysis (Second Edition), John Wiley & Sons.

தமிழியல் துறை

இரண்டாம் பருவம் - பிற துறைத்தாள் பயன்பாட்டுத் தமிழ்

நோக்கம்: அலுவலகம் மற்றும் பொதுத் தொடர்புகளில் தமிழ் மொழியினை மாணவர்கள் செம்மையாகப் பயன்படுத்திடப் பயிற்சியளித்தல்.

அலகு: 1 கடிதங்கள் - கடித வகைகள் - கடிதங்களை எழுதும் முறை

அலகு: 2 ஆவண எழுத்து - ஒப்பந்தங்கள் - விளக்கம் - தன்மைகள் - வகைகள் - நிர்வாகம், பதிவு, நிதி சார்ந்த ஒப்பந்தங்கள் - ஒப்பந்த அமைப்பு முறை.

அலகு: 3 விளம்பர எழுத்து - விளம்பரத் தமிழ் - விளக்கம் - விளம்பர வகைகள் - அறிவிப்புக்கள் - சுவரொட்டிகள் - விளம்பரங்களை எழுதும் முறை - அமைப்பு முறை - விளக்கம்

அலகு: 4 உரையாடல் - உரையாடல் பயிற்சி - உரையாடல் களன்கள் - அன்றாட நிகழ்வுகள் உரையாடலாகும் நிலை - கட்டுரைகள் - கட்டுரை வகைகள் - பொதுக் கட்டுரை, ஆய்வுக் கட்டுரை, செய்திக் கட்டுரை - விளக்கம் - நூல், நூலாக்க முறைகள்.

அலகு: 5 பிழையின்றித் தமிழ் எழுதல் - அகராதிப் பயன்பாடு

குறிப்பு:

ஒருவரி வினாக்கள் அலகு 1,4லிருந்து மட்டுமே கேட்க வேண்டும்

பாட நூல்கள்:

1. கா. பட்டாபிராமன், ஜீலை 2004: மொழிப்பயன்பாடு, என்.சி.பி.ஹெச்.,சென்னை.
2. அ. விநாயக மூர்த்தி 2010: விளம்பரக்கலை, பாலமுருகன் பதிப்பகம், வேலூர்.

பார்வை நூல்கள்:

1. த. பரசுராமன், சொல்திறன் விளையாட்டு, புதுவை மனிதவள மேம்பாட்டு மையம், புதுவை.
2. க.அரங்க.இராமலிங்கம் 2007:பயன்பாட்டுத் தமிழ்,சென்னை பல்கலைக்கழகம், சென்னை

பொறுப்பாசிரியர்

முனைவர் தி.க.ஜாஸ்மின் சுதா
உதவிப் பேராசிரியர்
தமிழியல் துறை.