



**SRM**  
**UNIVERSITY**  
(Under section 3 of UGC Act 1956)



## **MD Community Medicine**

Curriculum and Syllabus 2015

Branch Code: 14

**SRM Medical College Hospital & Research Centre**

SRM University

SRM Nagar, Kattankulathur

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## M.D COMMUNITY MEDICINE

### 1. GOALS

**Community Medicine** is the branch of medicine concerned with the health of populations. It strives to protect and promote the health and well-being of the community through the *Primary Health Care approach*. Health needs of populations are measured and appropriate strategies are developed to improve the health status of the community through health promotion, disease prevention and health protection.

Postgraduate training in Community Medicine aims at nurturing Primary Care Physicians who can recognize and manage common health problems in the community. The Community-oriented Primary Care Physician will have the ability to identify, prioritize and manage the health problems of the community. He / She would be an effective leader of the health team at primary care level.

The Community Physician demonstrates excellence in academics, health research, and leadership skills. He/she is instrumental in development of public health policy, design, implementation and evaluation of health programs and applies them to a broad range of community health issues.

The Goal of teaching and training of postgraduates in Community Medicine is directed towards achievement of the goal of “Health for All”.

Postgraduate training is aimed towards making the learner to be –

- Teachers / Trainers
- Researchers & Epidemiologists
- Health Planners, Organizers and Administrators

## 2. OBJECTIVES

The **general objective** of the postgraduate training programme in Community Medicine will be to enable to a

### *a. Teacher/ trainer to*

1. Plan and conduct an educational session / programme. He/she will be able to draw up lesson plan with details of educational objectives, content, process and essential inputs
2. Assist in development of curriculum, teaching and learning activities and methods of evaluation
3. Assist in manpower planning and development. He/she should be able to participate in programs for the selection, training and supervision of various cadres of health personnel

### *b. Researcher/ epidemiologist to*

1. Plan and execute a research study, including clinical trials.
2. Use / organize bio-statistical analysis using computers and software and prepare reports / papers.
3. Critically evaluate research activities
4. Make recommendations on policy and procedures

### *c. Public health planner/ organizer/ administrator to*

1. Define and manage the health problems of the community, which he/she serves.
2. He/she should be able to organize epidemiological studies to identify health problems
3. Plan, implement and evaluate various health programmes in his/her area, especially national health, family welfare, disease control/eradication programs

4. Select, train, supervise and manage various categories of health personnel working with him/her
5. Organize health care services, routine and for special groups and during periods of special needs such as disasters/calamities and epidemics

**Specific objectives:**

At the end of the MD programme in Community Medicine, the student will:

1. Know the structure and functioning of the health system at the state, national and international levels and its historical perspectives
2. Know the principles of nutrition, maternal health, family welfare and put the same in to practice
3. Apply the principles of epidemiology and biostatistics to health practice including the design and implementation of health related research studies and clinical preventive medicine trials
4. Know the principles of communicable and non-communicable diseases control and assist in the implementation of national health programmes.
5. Identify the socio cultural dimension in health and disease and apply this knowledge in the design and implementation of an integrated health and development programme
6. Apply the principles of environmental and occupational health in the design of health programs aimed at improving health status
7. Assess specific health situations in a population, plan, organize, implement and evaluate programmes aimed at improving health situations
8. Identify the health needs of the special groups within populations especially the aged, the disabled & workers and to respond to their needs
9. Know the principles of learning and apply this knowledge in facilitating the learning process in groups of people involved in health

10. Relate his/her knowledge of curative medicine to the improvement of the health status of a given population
11. Identify the role of the government, private and voluntary sector in health and understand the principles of innovations in health practices and research

## **Course Overview**

### **Duration of the Course**

The period of certified study and training for the Post-Graduate MD COMMUNITY MEDICINE shall be Three Academic years (six academic terms) 36 months. The academic terms shall mean six months training period.

### **Commencement of Academic Session**

The academic session for the Post-Graduate shall commence from May/June of the Academic Year.

### **Date of Examination**

The candidates admitted up to May/June of the academic year shall be registered for that academic year and shall take up their Final Third Year regular examination in April /October of the academic year after completion of 3 years /36 months.

### **Number of Examinations**

The University shall conduct not more than two examinations in a year, for any subject, with an interval of not less than 4 and not more than 6 months between the two examinations.

### **Attendance**

All candidates joining the postgraduate training programme shall work as full time residents during the period of training, attending not less than 80% (eighty percent) of the training during each calendar year, and will be given full time responsibility, assignments and participation in all facets of the educational process.

The period of training for obtaining the degrees shall be three completed years /36 months including the period of examination.

### 3. COURSE REVIEW

<b>Paper I</b>	<b>Epidemiology, Tropical Medicine &amp; Public Health Practice</b>
	History and concepts of Public Health and Community Medicine
	The Role of Social Sciences in health
	Concept of Primary Health Care
	Information, Education, Communication and Counselling
	Microbiology including Entomology, Parasitology, Immunology and Zoonotic diseases
	Environmental health and Ecology
	General Epidemiology, Biostatistics and Research methodology
	Principles of Nutrition and Applied Nutrition
	Basics of Health Economics
<b>Paper II</b>	<b>Epidemiology &amp; Control of Diseases</b>
	Epidemiology & control of communicable diseases
	Epidemiology & control of non-communicable diseases
	National Health Programs
	Screening
	Public Health emergencies and Disaster management
<b>Paper III</b>	<b>Health Care of Special Groups</b>
	Maternal and Child Health including Social obstetrics, Paediatrics and Geriatrics
	Demography and Family welfare
	School health, Adolescent health, Tribal health, refugees health
	Care of Differently abled, Community based Rehabilitation
	Community Mental Health
	Genetics and Health
	Occupational health
<b>Paper IV</b>	<b>Health Care Management and Public Health Administration</b>
	Health care systems & Health care delivery in India
	Health legislations in India, Health policies in India
	International Health
	Health Planning, management & Evaluation
	Health information system
	Essential medicines
	Latest developments in public health (recent advances)



Posting schedule - first year			
Department	1	Orientation to Community Medicine	1 month
Health Centers	2	Urban Health Training Centre	1 month
	3	Rural Health Training Centre	1 month
	4	Exposure to Tribal Health	1 week
Hospital	5	Medicine	1 month
	6	O.B.G (Social)	1 month
	7	Paediatrics (Social)	1 month
	8	Dermatology	15 days
	9	Psychiatry	15 days
	10	Pulmonology	15 days
	11	Anaesthesia	15 days
	12	Casualty	15 days
	13	Blood Bank	15 days
	14	Microbiology (ICTC & Central Lab)	15 days
	15	Medical Records Department & Central Sterile & Supply Department	1 week
Dissertation topic finalization			
Speciality Postings I	1	Infectious disease hospital	1 week
	2	TB hospital and DTO	1 week
	3	Leprosy hospital	1 week
	4	Vaccine centre @ King's Institute	1 week
	5	Malaria Research Centre	1 week
	6	Public Health Laboratory @ King's Institute	1 week
Exposure to Health System	1	Government Primary Health Centre	3 weeks
	2	Government Community Health Centre	1 week
Department		Review / revision Dissertation work Exam preparation	8 weeks

Posting schedule - second year			
<b>Speciality Postings II</b>	1	Cancer hospital	1 week
	2	District Health Office	1 week
	3	Industrial Visits (Ford, Team, Aavin)	1 week
	4	NGOs	1 week
	5	Port Health Office	1 week
	6	Occupational Health Centre, KK Nagar	1 week
	7	DRDO	1 week
	8	Town planning	1 week
	9	MBA, SRM University	1 week
	10	Env. Engineering, SRM University	1 week
	11	Water & sewage treatment plants, SRM Univ.	1 week
	12	Food Hygiene & Catering Inspections	1 week
	13	Hospital administration, SRM MCH	1 week
	14	Nutrition & Dietetics, SRM MCH	1 week
	15	Biomedical Waste Management, SRM MCH	1 week
	16	Local governance (village, Panchayat, Taluk)	1 week
<b>Speciality Postings III</b>	1	Vector Control & Research Centre, Pondicherry	1 week
	2	BHEL, Trichy	1 week
	3	Pasteur Institute, Connoor	1 week
	4	NIN, Hyderabad	1 week
	5	NIMHANS, Bangalore	1 week
<b>Dissertation work/ Health Centers</b>	1	Urban Health Training Centre	12 weeks
	2	Rural Health Training Centre	12 weeks

Posting schedule - third year			
Dissertation to be submitted within 6 months			
<b>Health Centres</b>	1	Urban Health Training Centre	6 weeks
	2	Rural Health Training Centre	6weeks

<b>Department</b>	Review / revision Dissertation work Exam preparation	24 weeks
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#### 4. Themes and Topics

**The broad areas the learner would be exposed during the 3 years to include**

History and Concepts in Public Health	Principles of Tropical Medicine
Primary Health Care	Maternal and Child Health Care
The Health Care Systems in India	Demography and Family Welfare Services in India
Role of Social and Behavioural sciences in Health	Health care of Special Groups
Biostatistics	Voluntary Sector in Health
Principles and Application of Epidemiology	Health Care Management
Research Methodology	Health Information System
Environmental Health	Medical Ethics
Disaster Management and public health emergencies	Principles and Practice of Information, Education and Communication
Epidemiology, prevention & control of Communicable diseases	Epidemiology of Chronic Non communicable diseases and conditions
Rehabilitation Services	Principles of Nutrition and Applied Nutrition
National Health Programs	Genetics and Health
Health Legislation	Community Mental Health
Urban Health	Social Paediatrics and School Health Services
Principles of Educational Science and Technology	Biomedical waste management and infection control
Medical Entomology	Essential Drugs and Rational use of drugs
Occupational Health	International health

### Additional topics of current interest

Components of National Health Policy	Writing of a Research Protocol.
Importance of Health seeking Behaviour	Health Insurance
Basis of formulating rational drug policy	National Health Mission (NHM)
Relevance of Evidence Based Medicine in the planning of Disease control Programs	Role of Clinical Specialists in Community Health Care Programs
Use of Computers in Public Health	Selected Methods in Operation Research.
Principles of Counselling	Family medicine
Nosocomial infection and Hospital Infection Control	Impact of Macro-Climatic changes (eg: Global Warming, etc) on Health.
Organizing health component of Relief camps during war, mass migration.	Development of Appropriate Technologies which is Cost Effective
Setting up and Implementing Quality Control of Health care programs.	Planning of public Health measures during pandemics of new diseases.
Concept of Hospital Management / System	Modern Management Approaches
Human Resource and material Management	Problem Solving Approaches and Managerial Decision Making

### The Teaching-learning process would be facilitated through

1. Lecture discussions
2. Practical Demonstrations
3. Field visits – Family Studies / Clinico-Social Case Studies / Site Visits
4. Institutional visits
5. Seminars
6. Journal Clubs
7. Epidemiological Exercises
8. Assignment writing.
9. Field and Health centre activity Review reports
10. Work-diary analysis
11. Supervised Training of undergraduates including Lesson Planning
12. Involvement in Specific Departmental Project works
13. Conducting of Surveys / epidemiological projects
14. Planning and Organizing Health Education activities.

Teaching session	Hours / week	Total hours
Lectures	1 hr / week	52 hrs
Seminars	1.5 hrs / week	78 hrs
Journal Clubs	1.5 hrs / week	78 hrs
Clinico Social case	1 hr / week	52 hrs
Undergraduate class	3 hr / week	156 hrs
Academic society meet	1 hr / week	52 hrs
<b>TOTAL</b>	<b>9 hrs / week</b>	<b>468 hrs</b>

FIRST YEAR		
	Journal Club	Weekly
	Seminar	Weekly
	Clinico-Social Case Study	Weekly
	Lectures	Weekly
	Undergraduate class	Weekly thrice
	Conferences / Symposia / Workshops	
SECOND YEAR		
	Thesis Work	
	Journal Club	Weekly
	Seminar	Weekly
	Clinico-Social Case Study	Weekly
	Lectures	Weekly
	Undergraduate class	Weekly thrice
	Conferences / Symposia / Workshops	

THIRD YEAR		
	Journal Club	Fortnightly
	Seminar	Fortnightly
	Clinico-Social Case	Fortnightly
	Family Study	Fortnightly
	Lectures	Weekly
	Conferences / Symposia / Workshops	

## 5. DETAILED SYLLABUS

### 5a - Theory

1. History of Public Health	
	Historical Lessons Learnt from the success and failure of Public Health strategies in India.
	Historical influence and importance of Indigenous System of Medicine in Health Care in India
	Historical Review of Implementation of the Bhore committee's and other Committee Reports on Health Services, Health Care and Health Professional Education in India.
	Historical Review of the development of National Health Policies.
	The trend of achievements of the country vis-à-vis the Health for All concept.
	Study of development of Health System models in India
	Contribution of Important scientists for public health

2. Concepts in Public Health	
	Concept of Disease control strategies.
	Public Health importance of the Health Promotion Approach.
	Concept of Health for All, Millennium development goals.
	Multi-sectoral approach in Health care programs.
	Health Care as part of Community Development
	Advantages of Community Participation in health care programs.
	Changing patterns of diseases.

<b>3. Primary Health Care</b>	
	Need and importance for prioritizing of Primary Health Care
	Principles of Primary Health Care
	Elements of Primary Health Care
	Models of Delivery of Primary Health Care & Public health care in UK, USA

<b>4. The Health Care Systems in India</b>	
	Organizational Structure and Functions of the Govt. Health care System at the Central, State, district, Primary Health centre, Community Health Centre, rural peripheral areas and also the urban areas.
	Health Care systems for Factories / Mines / Plantations.
	Role of N.G.O. sector in health care system.
	Corporate and Private Health Insurance systems.
	Family Medicine, General Practitioners.
	Indigenous Medicine system.
	Feasibility of Networking the Govt. and NGO sectors (Public Private Partnership) for better coverage of health programs.

<b>5. Role of Social and Behavioural sciences in Health</b>	
	Need and Importance and Role of Medico- Social work in Public Health
	Behavioural sciences – Health Seeking Behaviour in implementing Health care programs.
	Meaning and relationship of Behavioural Sciences to Health.
	Principles of Social Psychology as applicable to Health.
	Principles of social Anthropology as applicable to Health.
	Relevance and use of Social structures, social organizations and cultural factors in addressing problems in Health as part of Community Development.
	Influence of social & cultural factors in Health & disease
	Social problems in health & disease
	Gender based issues and its relevance to impact of health care programs.
	Impact of Urbanization and Industrialization on Health.
	Difference between Advising and Counselling
	Importance of Motivation in Health care.

<b>6. Health Legislation</b>	
	Review of provisions available under the various Acts related to health.
	This covers MCH, Industries, Mines, hospitals, plantations, labour, adoption, rail / road / air travel, waste treatment, child labour, handicapped, food safety, housing and public utilities, pollution, reporting of notified diseases, quarantine, medical negligence, consumers, education etc.

<b>7. Urban Health</b>	
	Accessibility of health care Facilities.
	Health advisory Role on Water and Waste Treatment planning Boards.
	Recommendations on Pollution control planning and monitoring systems, as related to health
	Urban Ecology such as housing, slum formations, social issues, road safety, urban stress factors, micro-climatic changes, etc which impact all dimensions of health.

<b>8. Principles of Educational Science and Technology</b>	
	Curriculum Planning, Educational Objectives.
	Principles of Learning.
	Teaching / Learning methods.
	Teaching skills including Micro Teaching.
	Pedagogy Skills
	Preparation and Use of Teaching Aids and Learning Research Materials.
	Methods of Evaluation

<b>9. Principles and Practice of Information, Education and Communication</b>	
	Principles of IEC / Health Education / communication for behavioural change
	Objectives of Health Education
	Content of Health Education.
	Relevance of using Communication Methods in the implementation of Health care.
	Meaning of Communication.
	Principles of effective Communication, relevant to health.



	Teaching Aids and Methods
	Communication Blocks/ barriers and means of overcoming the blocks.
	Communication strategies for facilitating effective implementation of Health programs at individual and community levels.
	The use and influence of Mass Media for IEC.
	Practice (Methods) of IEC and its application in Community Health.
	Quantitative and Qualitative Evaluation of impact of IEC programs.

<b>10. Principles of Nutrition and Applied Nutrition</b>	
	Nutrients and their daily Requirements.
	Classification of Foods
	Balanced Diet
	Nutritional Profiles of Major Foods
	Nutritional Deficiencies & Nutritional disorders
	Protein Energy Malnutrition
	Nutritional Importance of Trace elements
	Assessment of an individual's Nutritional Status
	Assessment of Community Nutritional Status
	Nutritional Problems in India including Food Borne Diseases
	Community Nutritional Programmes in India
	Methods and impact of nutritional Surveillance
	Social Problems in Nutrition
	Food Hygiene – domestic and commercial levels
	Food Adulteration including PFA Act - review of implementation
	Primordial Prevention of Lifestyle related nutritional diseases.
	National Nutritional policy, Food security, food standards, food safety
<b>11. Environmental Health</b>	
a) Water	
	Applied importance of Sources of water
	Water Pollution and review of control and monitoring methods
	Purification of water and its storage and distribution
	Water quality standards – its implementation and monitoring
	Epidemiology and Control of Water borne diseases

	Epidemiological Investigation of outbreak of water borne disease
	Rain water harvesting / water conservation.
b) Air	
	Indices of thermal comfort and their applied importance
	Air Pollution including monitoring, control and prevention
	Ventilation and its applied importance
c)	Importance of domestic and industrial Housing standards
d)	Impact and control of Noise Pollution
e)	Radiation Hazards from natural, industrial, hospital, communication devices
f)	Meteorological Environment and its Health impact
g)	Domestic and industrial Lighting Standards
h)	Disposal of Waste and Sanitation
	Disposal of Solid Wastes
	Excreta Disposal
	Sewage treatment and safe recycling guidelines
	Health Care and Hospital Waste Management
i)	Guidelines on Industrial Toxic wastes, nuclear wastes disposal.
j)	Role & importance of pollution control boards.

## 12. Medical Entomology

Identification of the arthropods as classified below:-

a)	Insecta: Mosquito, Flies, Lice, Fleas, and other insects.
b)	Arachnida: Ticks and Mites
c)	Crustacea: Cyclops
	Diseases transmitted and Modes of Transmission of diseases by arthropods
	Control of Arthropods and diseases borne by them
	Integrated Vector Control
	Types, Mode of application and effectivity of Insecticides & Rodenticides.
	Types and mechanism of Insecticide Resistance and modes of Resistance prevention

13. Communicable diseases: Epidemiology, prevention & control						
Respiratory Infections						
	Small pox	Mumps	Chicken pox	Measles	Meningococcal meningitis	
	Influenza	Diphtheria	Whooping cough	Tuberculosis	Acute respiratory infections	
	SARS	Rubella	Others			
Intestinal Infections						
	Poliomyelitis	Viral Hepatitis	Cholera	Acute Diarrhoeal diseases	Typhoid fever	
	Food Poisoning	Amoebiasis	Ascariasis	Hookworm infection	Dracunculiasis	
Arthropod-borne Infections						
	Dengue syndrome		Malaria	Lymphatic filariasis	Others	
Zoonoses						
	<i>Viral</i>	Rabies	Yellow fever	Japanese encephalitis	KFD	Others
	<i>Bacterial</i>	Brucellosis	Leptospirosis	Human salmonellosis	Plague	Others
	<i>Rickettsial</i>	Scrub typhus	Murine typhus	Rickettsial Zoonoses	Tick typhus	Others
	<i>Parasitic</i>	Taeniasis	Leishmaniasis	Hydatid disease	Q fever	Others
Surface Infections						
	Trachoma		Tetanus	Leprosy	STD	AIDS
Emerging and Re-emerging infectious diseases						
Hospital Acquired Infections						

<b>14. Epidemiology of Chronic Non communicable diseases and conditions</b>	
	Cardiovascular diseases
	Coronary Heart disease
	Hypertension
	Stroke
	Rheumatic heart disease
	Cancer
	Obesity
	Diabetes
	Blindness
	Accidents and Injuries

<b>15. Rehabilitation Services</b>	
	Concepts of rehabilitation, Types of rehabilitation
	Role of rehabilitation services in various diseases
	Approaches to rehabilitation – institution based and community based rehabilitation
	Rehabilitation services – Govt, NGOs and other care providers

<b>16. National Health Programs</b>	
	Components of individual National health Programs
	Review of factors associated with the success / failure / stagnation of the present status of these National Health Programs.
	Needs Assessments for New Programmes

<b>17. Principles of Tropical Medicine</b>	
	Present problem statement of diseases of public health importance.
	Descriptive epidemiological factors of specific diseases of public health importance.
	Causes and factors related to increasing or decreasing trends of these diseases.
	Factors responsible for emergence of new diseases.
	Review of changing disease control strategies for diseases of public health importance.
	Accessibility and availability of Health Care services in Desert and Tribal areas

<b>18. Maternal and Child Health Care</b>	
	Meaning and relevance of Risk Approach to Maternal and Child Health
	Review of the public health relevance of Maternal and Child health physical, mental, social and behavioural problems
	Rationale, Components and Implementation of Antenatal, Intranatal and Postnatal Care
	Rationale, Components and Implementation of Child Health Care
	Maternal and Childhood Disease control strategies
	Indicators of MCH care and their interpretation
	Organizational and Functional components of the Maternal and Child Health related Programs in India Eg. RCH, ICDS, IMNCI etc.
<b>19. Demography and Family Welfare Services in India</b>	
	Significance of Demography in public health
	Interpretation and implications of Demographic Cycles on global and Indian context.
	Demographic trends in India and its application in the planning of Health programmes
	Fertility indicators
	Meaning and relevance of Family Planning, Family welfare and Population Control
	Methods of Family Planning – Review of mechanism, effectivity, factors for non-compliance of usage, contraindications and side-effects.
	Formulation and Evaluation of Implementation strategies of Family planning programs.
	National population policy
	Legislations
<b>20. Genetics and Health</b>	
	Relevance and Impact of population Genetics
	Preventive and Social Measures in Genetics
	Implication of Gene therapy, Stem-cell research on future disease control program strategies.

<b>21. Social Paediatrics and School Health Services</b>	
	Objectives of school health services
	Planning for components of school health service and their implementation strategies (including child- parent- teacher and community roles)
	School level counselling for chronic absenteeism, drug abuse, and gender based issues, behavioural and learning problems.
	Monitoring Health of school children and school staff
	Interventional strategies for Juvenile Delinquency, Child Abuse, Child Labour, Street Children, Child Marriage.
	Child Guidance Clinic
	Child Placement
	Disabled / Handicapped children

<b>22. Biostatistics</b>	
	Collection / Organization of data / Measurement scales
	Presentation of data and Record keeping
	Measures of central tendency
	Measures of variability
	Sampling and Planning of health survey
	Probability, Normal distribution and inductive statistics
	Estimating population values
	Tests of significance (Parametric / Non-parametric )
	Analysis of variance
	Multi-variate Analysis and Meta-analysis
	Association and correlation and Regression
	Vital Statistics & Registration
	Evaluation of health and measurement of morbidity / mortality
	Life table and its uses
	Use of computers ( SPSS, Epi-info etc)
	Census, SRS
	Qualitative Research methodologies
	Evaluation methodologies

<b>23. Principles and Application of Epidemiology.</b>	
	Principles of Epidemiology
	Types and detailed methodologies of Epidemiological studies such as Descriptive, Analytical, Experimental and importance of Multi-Centric studies.
	Appropriate choice of epidemiologic approach for given situations.
	Interpretation of Epidemiological studies.
	Screening for diseases, Evaluation of screening tests.

<b>24. Research Methodology</b>	
	Preparing dissertation synopsis
	Identifying need for research study
	Problem statement
	Formulating Objectives
	Methods of Literature Review (References and Bibliography)
	Conceptual framework of study
	Research design choice
	Choice of Methodologies
	Analysis and discussion and presentation

<b>25. Community Mental Health</b>	
	Principles of Community Mental Health
	Epidemiological factors associated with the current and emerging mental disorders of public health importance.
	Emerging mental health issues of marital, family based problems, travel related, migration, resettlement and urbanization problems.
	Planning and Intervention strategies for community based mental health programs
	Drug Abuse, Tobacco and Alcohol Addiction and its Prevention.

<b>26. Occupational Health</b>	
	Relevance of Occupational Environment to Health Hazards
	Surveying for identifying Industrial Health hazards
	Surveying for identifying Health Hazards in Home based cottage Industries.
	Basic principles of ergonomics and work-physiology

	Relevance and meaning of Industrial Toxicology in the management of Health hazards.
	Basic scope of occupational health legislation such as ESI Act, Factories Act, Mines Safety Act
	Causes, consequences and Intervention Strategies for occupation related diseases
	Principles of Industrial Safety measures and Industrial house-keeping.
	Causes and reduction of Sickness Absenteeism.
	Principles of Industrial Psychology including work related stress management.
	Gender Issues in work environment.
	Providing Social security for industrial workers by the Industrial Corporate Sector in view of Globalization and Outsourcing of work.
<b>27 Health care of Special Groups</b>	
<b>Aged</b>	
	Public health implications of increasing trends in longevity of life.
	Health planning strategies for enhancing quality of life of senior citizens.
	Need, relevance and components of Community Based Geriatrics care Programs.
	Social Security for the Aged.
<b>Physically, Mentally and the socioeconomically Challenged</b>	
	Vulnerability factors in health, for the physically and Socioeconomically challenged people.
	Strategies for Behavioural change in the community towards the physically challenged.
	Multi-disciplinary approach in the health care of the physically challenged.
	Community Based Rehabilitation for the physically challenged
	Care of Refugees, Marginalized and other vulnerable groups
<b>Emporiatics – Traveller’s health and International Health</b>	
<b>28. Voluntary Sector in Health</b>	
	Roles of the Voluntary Sector in Health Care
	Case Studies of Health care strategies adopted by NGOs.
	Networking strategies for Govt. and NGO sectors in Health Program Implementation



<b>29. Health Care Management</b>	
	Relationship of Planning to Management
	Situational Analysis Methods
	Vision, Mission, Goal setting and objective formulation
	Criteria setting for Prioritization
	Resource Generation Methods
	Strategies Formulation
	Participatory Approaches to plan execution
	Monitoring and Evaluation Parameters selection and implementation
	Project Report Writing and Reporting
	Selected Management Techniques relevant to Health care.
	Relevance of Qualitative methods in Health Management
	Basics of Health Economics
	Importance of Operation Research Methods in Health care Management.
	Basis of Health Systems Research.
<b>30. Health Information System.</b>	
	Uses of Health Information System in Health planning including Situational analysis, Prioritization, Monitoring and Evaluation.
	Sources and methods of data acquisition.
	Applications of health information on National and International Notification of Diseases.
	Use of Internet and Intranets including NICNET, modern technologies etc.
<b>31. Disaster Management and public health emergencies</b>	
	Brief Review of definition, types and causes of Disaster.
	Understanding the short and long term Health Impact of Disasters
	Assessing priorities for Disaster Response.
	Planning for Administrative, Operational, and Technical Intervention for Disaster Relief program including Multi-Sectoral Co-ordination.
	Community Disaster Preparedness training needs for Health Providers and Beneficiaries.
	Post Disaster Follow up care

<b>32. Biomedical waste management and infection control</b>	
	Sources and types of biomedical waste
	Hazards of biomedical waste
	Methods of disposal of biomedical waste
	Guidelines for collection and disposal of biomedical waste
	Legislations pertaining to biomedical waste disposal in India
	Infection control – Biohazards and universal barrier precautions
	Nosocomial and Iatrogenic infections
<b>33. Medical Ethics</b>	
	Introduction to medical ethics
	Professionalism, doctor-patient relationship
	Ethical issues and dilemmas in health care settings
	Ethical issues in public health and health promotion
	Research ethics
	Special topics – genetics, organ donation & transplantation, mental health & child care, alternative systems of health care , consent, euthanasia,
<b>34. Essential Drugs and Rational use of drugs</b>	
	Concepts and principles of essential drugs
	Essential drug list – WHO, National and State
	Benefits of essential drugs
	Concept of rational use of drugs
	Approaches to rational use of drugs
	Benefits of rational use of drugs

## 5b - Practicals

1. Microbiology applied to Public Health (Dept. of Microbiology)		
	Hand on experience in staining techniques and interpretation of:	
	Grams Stain	JSB Stain
	Ziehl-Neilson Stain	Microscopic examination of stools and interpretation
	Peripheral blood examination of Thick and Thin Smears and Reporting	
	Demonstration of Collection, storage and Dispatch of water, stools, body fluids Samples to Laboratory	
	Interpretation of commonly used serological tests such as Physical / Biological / Chemical water analysis reports / Widal / HIV / Hepatitis B / VDRL / Viral Antibody Titres	
2. Medical Entomology		
	Demonstration of Collection and transportation of Entomological specimens	
	Identification of mosquitoes/ fleas/ticks/ others	
	Demonstration of mounting entomological specimens and reporting	
	Interpretation of Entomological Survey findings and Vector indices calculation	
3	Epidemiological (including outbreaks of disease) and Statistical Exercises	
4	Clinico Social Case Studies and family studies to illustrate principles and practice of Community Health	
5	Investigation of an Outbreak of a disease and suggestion of control Measures.	
6. Field and simulated Exercises in		
	PRA Techniques and Interpretive Reporting	
	IEC Field Exercises organization, execution and evaluation	
	Planning for simulated public health intervention programs including disaster relief measures.	
	VED Analysis etc.	
	Assessment of Health Needs.	
	Simulated exercises in Preparation of Budgeting at the PHC level	

	Demonstration of Supervisory methods and Performance Appraisal at PHC/SC and field level.
	Simulated calculation of Requirement of Vaccines, Medicines, transport schedules, lab supplies, equipment, staff deployment, stationary, etc. at the PHC level
	Simulated exercises for Organization of field and centre based camps for Family Welfare, MCH, IEC, Specialist camp, Immunization camps.
7	Diet and Nutritional Survey of a Community
8	Collection and Dispatch of Food Samples for Lab Investigations
9	Situational analysis of selected potentially health hazardous Environments and its influence on health
10	Industrial Health Survey and recommendation reports for Work places. Include interpretation of reports quantifying air pollution, noise pollution, temperature, humidity and other meteorological factors and their effect on health.
11	Socio-Economic surveys in Urban and Rural areas and their interpretation on direct and indirect health care needs and usage.
12	School Health Surveys with recommendations.
13	Family Counselling

<b>14. Situational status reporting on visits / Postings to the following institutions</b>		
(organizational structure and functioning with feasible recommendations)		
	District Health Office	District Hospital
	Taluk Hospital	PHC / SC / CHC
	Field Publicity Office	ICDS office/ Anganwadi Centre
	Public Health Laboratory	Sewage Treatment Plant
	Vector control centre	Any large NGO
	Family Welfare Camps	Infectious disease hospital
	Malaria/DTC/ Filarial units	National Tuberculosis Institute / DOTS centre
	Leprasorium	Cancer Hospital

Malaria Research Centre	Polio Surveillance Office
Visit to factory / inspectorate of factories	Home for the aged
Blindness Rehabilitation schools	Deaf and Dumb schools
Spastic society	Physically Handicapped Centre
Market place	Slaughter House
Hotel food storage, cooking and food waste disposal	Milk Dairy
Water supply and water treatment plant	Food and Beverages Processing Units

**Postings to Urban and Rural Health Centres with emphasis on:-**

- ❖ Observing and participation in Antenatal care
- ❖ High risk pregnancy identification
- ❖ Registration and participation in care of Antenatal and under-fives
- ❖ Nutrition Status calculation, Growth and Development monitoring through analysis of cumulative under-five and Antenatal cards and follow-up programs for drop-outs, etc
- ❖ Records design, recording procedures, data compilation and reporting procedures for National health programs
- ❖ Disinfection and Infection control methods
- ❖ Field visits with peripheral health care staff to review problems associated with Implementation of Health programs.
- ❖ Participation in organization and management of health camps
- ❖ Observation and reviewing methods of motivating for Family welfare
- ❖ Health Information preparation using MCH indicators and their interpretation
- ❖ Measuring Health care service Utilization rates for the centre
- ❖ Observation and participation in the Laboratory work with emphasis on result interpretation
- ❖ Medical Waste management observation and review report

- ❖ Immunization coverage calculation and follow up
- ❖ Cold Chain observation up to vaccine administration at field level
- ❖ Collection and dispatching and follow-up for Vaccine Potency testing

## MAINTENANCE OF LOGBOOK

**Log book** - The log book is a record of the important activities and their critical review by the candidates during his / her training. The log book entries include academic activities, seminars & presentations attended, procedures learnt as well as casual notes on

- ❖ The Problems encountered
- ❖ Alternative solutions
- ❖ Innovation
- ❖ Organizational work
- ❖ Recommendation by student
- ❖ Inter-sectoral work
- ❖ Self-assessment done.

The log book shall be periodically reviewed by the professors / Head.

Internal assessment should be based on the evaluation of the log book review.

Collectively, log books are a tool for the evaluation of the training programme of the institution by the University.

1. Self-Evaluation--Through daily Work Diary
2. Faculty Evaluation --Through scrutiny of work diary by Head of Dept and staff
3. Technique of skills in Pedagogy - Through lesson plans and supervised taking of classes for undergraduates
4. Skill evaluation - through demonstration and Practicals and field reports
5. Knowledge Evaluation-- through journal clubs, seminars and tests.

## THESIS

Every candidate registered as post graduate shall carry out work on an assigned research project under the guidance of a recognized post graduate teacher, the result of which shall be written up and submitted in the form of a thesis.

Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature. Thesis shall be submitted at least six months before the theoretical and clinical / practical examination.

The thesis shall be a bound volume of a minimum of 50 pages and not exceeding 75 pages of typed matter (Double line spacing and on one side only) excluding certification, acknowledgements, annexure and bibliography.

Thesis should consist of

- (a) Introduction
- (b) Review literature
- (c) Aims and objectives
- (d) Material and methods
- (e) Result
- (f) Discussion
- (g) Summary and conclusion
- (h) Tables
- (i) Bibliography
- (j) Annexure

Four copies of thesis shall be submitted six months prior to the commencement of the theory examinations on the date prescribed by the Controller of Examinations of this University. The thesis should be approved by the Professor of that branch and the same has to be forwarded to the controller of examinations, by the head of the department through the Dean of the college.

Two copies in addition are to be submitted as an electronic version of the entire dissertation in a standard C.D. format by mentioning the details and technicalities used in the C.D. format.

The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and clinical; and on the acceptance of the thesis by two examiners, the candidate shall appear for the final examination.

### **EVALUATION OF THESIS :**

#### **ACCEPTED / NOT ACCEPTED**

No marks will be given

#### **Thesis (guidelines to students)**

Step 1	Identifying guide and co guide
Step 2	Review of available literature
Step 3	Short listing of topic of interest
Step 4	Workup in detail on few topics keeping in mind the feasibility and discussion at the dept level
Step 5	Selection and finalization of the topic and submission of protocol
Step 6	Preparation and submission of synopsis six months after the date of admission and as notified by the University
Step 7	Preparation of study instrument
Step 8	Pilot survey
Step 9	Finalizing the study
Step 10	Data collection
Step 11	Data entry, compilation and processing
Step 12	Analysis and interpretation
Step 13	Presentation and Discussion at the Dept level
Step 14	Preparation and submission of dissertation to Registrar Evaluation six months prior to university examination as notified by the University



## SCHEME OF EXAMINATION

### 7. University Examination Pattern

The University theory and practical exams would be at the end of Year III

Theory	
Paper I	Epidemiology, Tropical Medicine & Public Health Basic Sciences
Paper II	Epidemiology & Control of Diseases
Paper III	Health Care of Special Groups
Paper IV	Health Care Management and Public Health Administration including recent advances

Practicals	
1.	Clinico-social case study
	Family health appraisal & Clinico-social case study
2.	Problem on Epidemiology and Biostatistics
3.	Spotters
4.	Viva-Voce Examination
5.	Pedagogy Exercise

### **1.Clinico-social case study**

Clinical case will be allotted to the students, they should examine the given case and give their provisional diagnosis and discuss the line of investigations, clinic social aspects and comprehensive management of the case at individual, family and community levels.

### **2. Family health appraisal & Family study**

One family will be allotted in rural/urban field practice area. Presentation and discussion will be on the health status of the family and of any case/individual in the family and on factors that contributed towards maintenance of health and occurrence of disease. Summarise the Medical, environmental, social, nutritional and economic problems of the family and feasible solution.

### **3.Problem on Epidemiology and Biostatistics**

Based on situation analysis from communicable or non-communicable diseases, MCH & FP including demography. Environmental health including Entomology and Occupational Health

### **4. Spotters**

Identification and description of relevant public health aspects of the spotters/specimen by the student. Spotters shall be from Nutrition, Environmental health including Entomology & Occupational health, MCH & FP; Microbiology including parasites; vaccines, sera and other immunobiologicals

### **5. Viva-Voce Examination:**

Students will be examined by all the examiners together about student's comprehension, analytical approach, expression and interpretation of data. Student shall also be given case reports, charts for interpretation. It includes discussion on dissertation.

## 6. Pedagogy Exercise:

A topic would be given to each candidate along with the Practical Examination question paper on the first day. The Student would be asked to make a presentation on the topic on the second day for 20 minutes.

### Distribution of Marks

Section	Details	Marks	Time	
Theory	Paper I, II, III & IV (100 marks each)	100 marks	3 hours	400
	Short Answers (10 x 6 = 60 marks)			
	Essay Questions (2 x 20 = 40 marks)			
Practicals	<b>DAY I</b>			
	Clinico-social case study	50marks	60 mins	170
	Family health appraisal- Family study	50 marks	60 mins	
	Epidemiology & Biostatistics exercises (2 x 25)	50 marks	60 mins	
	Structured Spotters (5 x 4)	20 marks	30 mins	
	Topic allocation for pedagogy			
	<b>DAY II</b>			
	Pedagogy	50 marks	60 mins	130
	Viva-Voce Examination including Dissertation discussion	80 marks	60 mins	
	<b>TOTAL</b>			700

### MARKS QUALIFYING FOR A PASS

MARKS QUALIFYING FOR A PASS	MAXIMUM MARKS	QUALIFYING FOR A PASS 50% MARKS
Theory Examination	400	200
Practical Including clinical and Viva voce examination	300	150

A candidate shall secure not less than 50% marks in each head of passing which shall include 1. Theory, 2. Practical including clinical and viva voce examination.

\*“ The postgraduate medical students are required to pass theory and practical examinations separately. An examinee should obtain minimum 40% marks in each theory paper and not less than 50% marks cumulatively in all the four papers for degree examination to be cleared as “Passed” at the said degree examination”

*\*As per medical council of India notification dated 03.09.2014 and the same approved in the 28<sup>th</sup> academic council meet of the SRM University held on 23/03/2015.*

## EXAMINATION AND EVALUATION

### (1) EXAMINERS

(a) All the Post Graduate Examiners shall be recognized Post Graduate Teachers holding recognised Post Graduate qualifications in the subject concerned.

(b) For all Post Graduate Examinations, the minimum number of Examiners shall be four, out of which at least two (50%) shall be External Examiners, who shall be invited from other recognised universities from outside the State. Two sets of internal examiners may be appointed one for M.D./M.S. and one for diploma.

(c) Under exceptional circumstances, examinations may be held with 3 (three) examiners provided two of them are external and Medical Council of India is intimated the justification of such action prior to publication of result for approval. Under no circumstances, result shall be published in such cases without the approval of Medical Council of India.

(d) Guidelines on appointment of post graduate examiners are as follows;-

1. No person shall be appointed as an examiner in any subject unless he fulfills the minimum requirements for recognition as a Post Graduate teacher as laid down by the Medical Council of India and has teaching experience of 8 (Eight) years as a Lecturer / Asstt. Professor out of which he has not less than 5 (Five) years teaching experience after obtaining Post Graduate degree. For external examiners, he should have minimum three years experience of examinership for Post Graduate diploma in the concerned subject. Out of internal examiners, one examiner shall be a Professor and Head of Department or Professor.

2. There shall be at least four examiners in each subject at an examination out of which at least 50% (Fifty percent) shall be external examiners. The external examiner who fulfils the condition laid down in clause – 1 above shall ordinarily be invited from another recognized university, from outside the State: provided that in exceptional circumstances examinations may be held with 3 (three) examiners if two of them are external and Medical council of India is intimated with the justification of such examination and the result shall be published in such a case with the approval of Medical council of India.

3. An external examiner may be ordinarily been appointed for not more than three years consecutively. Thereafter he may be reappointed after an interval of two years.

4. The internal examiner in a subject shall not accept external examinership for a college from which external examiner is appointed in his subject.

5. The same set of examiners shall ordinarily be responsible for the written, practical or part of examination.

6. There shall be a Chairman of the Board of paper – setters who shall be an external examiner and shall moderate the question papers.

7. The Head of the Department of the institution concerned shall ordinarily be one of the internal examiners and second internal examiner shall rotate after every two year

## **2) Number of candidates**

The maximum number of candidates to be examined in Clinical / practical and Oral on any day shall not exceed six for M.D./M.S. degree examinations

## **3) Number of examinations**

The university shall conduct not more than two examinations in a year, for any subject, with an interval of not less than 4 and not more than 6 months between the two examinations.

## **Doctor of Medicine (M.D.) Community Medicine**

M.D. examinations, in any subject shall consist of Thesis, Theory Papers, and clinical/Practical and Oral examinations.

### **(a)Thesis**

Every candidate shall carry out work on an assigned research project under the guidance of a recognised Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis.

Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature. Thesis shall be submitted at least six months before the theoretical and clinical / practical examination.

The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical; and on the acceptance of the thesis by two examiners, the candidate shall appear for the final examination.

### **(b)Theory**

(i) There shall be four theory papers.

(ii) Out of these one shall be of Basic Medical Sciences and one shall be of recent advances.

(iii) The theory examinations shall be held sufficiently earlier than the Clinical and Practical examination, so that the answer books can be assessed and evaluated before the start of the Clinical/Practical and Oral examination.

### **(c) Clinical / Practical and Oral**

(i) Clinical examination for the subjects in Clinical Sciences shall be conducted to test the knowledge and competence of the candidates for undertaking independent work as a specialist/Teacher, for which candidates shall examine a minimum one long case and two short cases.

(ii) Practical examination for the subjects in Basic Medical Sciences shall be conducted to test the knowledge and competence of the candidates for making valid and relevant observations based on the experimental/Laboratory studies and his ability to perform such studies as are relevant to his subject.

(iii) The Oral examination shall be thorough and shall aim at assessing the candidate knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the speciality, which form a part of the examination.

A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including clinical and viva voce examination

### **Evaluation of answer scripts**

The answer books will be valued by two examiners. One of the two examiners will be from this university and the other will be from any other university. The average of the two marks secured by the candidate will be taken into account. If the difference between two marks exceeds 20% the answer scripts shall be valued by the third examiner. The average of the nearest two marks shall be considered as the final mark

**Model Question Paper**

**M.D. DEGREE EXAMINATION  
BRANCH - COMMUNITY MEDICINE  
EPIDEMIOLOGY, TROPICAL MEDICINE AND PUBLIC HEALTH  
HEALTH BASIC SCIENCES  
PAPER -I**

**Time: 3 hours**

**Maximum: 100 marks**

**Answer ALL the questions**

**I. Essay**

**2x20=40 marks**

1. Define Social Security, social assistance and social insurance. Discuss in detail the social security measures for industrial workers in India.
2. Give the steps involved in planning an observational study on the tea consumption in women as a cause for anemia.

**II. Write notes on:**

**10x6= 60 marks**

1. Integrated Vector control for mosquitoes.
2. Sample registration system.
3. W.H.O. cluster sampling technique.
4. Analysis of variance.
5. Indices of thermal comfort.
6. Cultural factors in health and disease.
7. Methods of survival analysis.
10. Role of meta analysis in research.
9. Communication barriers
10. Sanitation barrier.



**M.D. DEGREE EXAMINATION  
BRANCH - COMMUNITY MEDICINE  
EPIDEMIOLOGY AND CONTROL OF DISEASES  
PAPER -II**

**Time: 3 hours**

**Maximum: 100 marks**

**Answer ALL the questions**

**I. Essay**

**2x20=40 marks**

1. Epidemiology of Swine flu and its control.
2. Give the steps involved in planning an observational study on the tea consumption in women as a cause for anemia.

**II. Write notes on:**

**10x6= 60 marks**

1. DOTS and DOTS Plus.
2. Epidemic prone febrile illness and basic infrastructure required to detect them early.
3. Spectrum of disease presentation of lymphatic filariasis.
4. Anti typhoid vaccine
5. Secondary prevention for Rheumatic heart disease
6. Strategy of pulse polio program
7. Amplifier host
8. Give the natural history of diabetes mellitus.
9. Minimum needs programme
10. Community nutrition programmes in India.

**M.D. DEGREE EXAMINATION  
BRANCH - COMMUNITY MEDICINE  
HEALTH CARE OF SPECIAL GROUPS  
PAPER -III**

**Time: 3 hours**

**Maximum: 100 marks**

**Answer ALL the questions**

**I. Essay**

**2x20=40 marks**

1. Enumerate and define the fertility related indicators. Explain the concept of Unmet need for reproductive health services and the measures adopted to meet this need.
2. List the health problems of the elderly in India. Write briefly on the prevention and control of these problems.

**II. Write notes on :**

**10X6=60 marks**

1. Health problems- Refuge and displaced children
2. Adolescent vaccines.
3. Reproductive and Sexual health Education of Adolescent.
4. Family planning counseling.
5. Medical benefit for industrial workers.
6. Verbal autopsy in finding cause of maternal deaths.
7. Growth monitoring.
8. Early Neonatal Care.
9. Benefits and draw backs of Risk approach in Antenatal care.
10. Specific protection in Antenatal care.

**M.D. DEGREE EXAMINATION  
BRANCH - COMMUNITY MEDICINE  
HEALTH CARE MANAGEMENT AND PUBLIC HEALTH  
ADMINISTRATION INCLUDING RECENT ADVANCES  
PAPER -IV**

**Time: 3 hours**

**Maximum: 100 marks**

**Answer ALL the questions**

**I. Essay**

**2x20=40 marks**

1. "Tamil Nadu Public Health Act" – Discuss its relevance in the modern health environment.
2. Contribution of World Health Organization to the health of India.

**II. Write notes on :**

**10X6=60 marks**

1. Discuss the organizational design that is ideal for health care.
2. Discounting factor analysis in health economics.
3. Principles to be followed in recruiting personal for the job of Health Inspector.
4. Systems Analysis.
5. Urban Health Care-the current challenges and solutions.
6. National Program for control of blindness.
7. Legal measures to control health impact of air pollution.
8. Millennium Development Goals-Where does India stand?
9. Role of mother NGO's(Not for profit organization)
10. Health regulations for International travel.

## Recommended Books & Journals

### BOOKS

1. Park's Text Book of Preventive & Social Medicine, 23<sup>st</sup> Edition Banarsidas Bharot, Jabalpur, 2015.
2. Maxcy-Rosenau-Last Public Health & Preventive Medicine, 15<sup>th</sup> Edition McGraw Hill, Cakutta, 2008.
3. Oxford Textbook of Public health, 6<sup>th</sup> Edition Oxford, New York, 2012.
4. Manson's tropical diseases, 23<sup>rd</sup> Edition Saunders, Philadelphla, 2013.
5. Epidemiology: By Leon Gordis, 5<sup>th</sup> Edition BI Publication, New Delhi, 2014.
6. Epidemiology, Biostatistics and Preventive Medicine. James F Jekel, David L Katz, Joann G Elmore 3<sup>rd</sup> Edition (W.B.Saunders Company), 2007.
7. Methods in Biostatistics, BK Mahajan, 8<sup>th</sup> Edition Jaypee, 2015.
8. Introduction to Biostatistics and Research Methods, PSS Sundar Rao, 5<sup>th</sup> Editon Prentice Hall, Publication New Delhi, 2012.
9. Hunter's Diseases of Occupations, Baxter, Peter.J, 10<sup>th</sup> Edition Hodder Arnold, 2010.
10. Text Book of Preventive & Social Medicine Mahajan B K and M.C.Gupta, 4<sup>th</sup> Edition Jaypee Brothers, New Delhi, 2013.
11. Modern Nutrition in Health, SHILS, Maurice. 11<sup>th</sup> Edition Lippincott, Philadelphla, 2014.

12. Last J M. A Dictionary of Epidemiology, 5th Edition, Oxford University Press, New York, 2009.
13. Kishore J, A Dictionary of Public Health, Central Book Agency, Calcutta, 2007.
14. Basic Epidemiology. R. Beaglehole, R. Bonita, T.KJellstrom 2<sup>nd</sup> edition [WHO Geneva] 2006.
15. Textbook of Community Medicine. By Dr. A.P .Kulkarni and Dr. J.P Baride. (Vora Medical Publication – Mumbai), 4<sup>th</sup> Edition, 2013.
16. Epidemiology and Biostatistics By Robert Nordness, M.D, (Mosby Elsevier) Mosby, Edinburgh. 2006
17. Public Health Nutrition (The Nutrition Society Textbook) (Paperback) by Michael J. Gibney (Editor), Blackwell Publishing, 2005.
18. Public Health Administration: Principles for Population-Based Management By Novick Lioyd Cynthia R Morrow Glen P Mays, 3<sup>rd</sup> Edition, 2013
19. T.Bhaskara Rao. Methods of Biostatistics. 3<sup>rd</sup> edition Paras publication. 2010.
20. Essentials of Community medicine practicals . DK Mahabalaraju. 1 st edition Jaypee . 2012.

## **JOURNALS**

### **Indian Journals**

1. Indian Journal of Public Health
2. Indian Journal of Community Medicine
3. Indian Journal of Occupational and Environmental Health
4. Indian Journal of Infectious Diseases.
5. Indian Journal of Epidemiology
6. Indian journal of Malaria & Other vector borne diseases
7. Indian Journal of Maternal & Child Health.
8. Indian Journal of Preventive and Social Medicine.
9. Indian Journal of Medical Research.
10. Indian Journal of Malariology.
11. Indian Journal of Medical Education.
12. Journal of Indian Medical Association.
13. ICMR Bulletin

### **International Journals**

1. Bulletin of the WHO
2. Journal of Epidemiology and Community Health
3. American Journal of Public Health
4. Journal of Public Health (Oxford)
5. The Lancet
6. British Medical Journal
7. Annals of tropical medicine and public health
8. Tropical Disease Bulletin
9. New England Journal of Medicine
10. POPLINE – CDROM version of Medline

***Success is often a mis-step in the right direction***  
***- Albernstein***



