

## Syllabus and Examination pattern for Post - Graduate Medical Courses

### NOTIFICATION

Ref. :

- (1) Medical Council of India Regulation on Graduate Medical Education, 1997.
- (2) Amendment of the regulations on graduate medical education notified by Government of India from time to time :
  - a. Gazette Notification dated 29.05.1999.
  - b. Notification no. MCI-37 (2)/2001/Med-922, dated 12.04.2001.
  - c. Notification no. MCI-26 (3)/2003/Med-18503, dated 26.09.2003.
  - d. Notification no. MCI-26 (3)/2003/Med-20958, dated 15.10.2003.

*In exercise of the powers, conferred under section 26 of Krishna Institute of Medical Sciences Deemed University, the Board of Management in its meeting held on 27<sup>th</sup> June, 2006, has been pleased to approve the Bye-law pertaining to Post Graduate Medical courses as given in schedule here to Annexed.*

*The Bye-law as above shall be effective for the students admitted to Post Graduate Medical courses from the academic year 2006-07 onwards.*

**By Order  
Registrar**

1. This byelaw shall be called Syllabus and Examination pattern for Post-Graduate Medical Course.

### **M.D. Community Medicine**

#### **General Objectives**

The General objectives of the training programme in Community Medicine will be to enable a candidate to be 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.
2. Content, process and essential inputs.
3. Assist in development of curriculum, teaching and learning activities and methods of evaluation.
4. Assist in manpower planning and development. He/She should be able to participate in programmes for the selection, training and supervisions of various cadres of health personnel.

#### **Researcher to**

1. Plan and execute a research study including clinical trails. Use/Organize biostatistical analysis using computers and software's and prepare reports/papers.
2. Critically evaluate research activities.
3. Make recommendations on policy and procedures.
4. Update knowledge using library.

#### **Public Health Specialist to**

1. Define and manage the health problems of the community, which he/she serves. He/She should be able to organize epidemiological studies to identify health problems.

2. Plan, implement and evaluate various health programs in his/her area, especially National Health, Family Welfare and disease control/ eradication programmes.
3. Select, train, supervise and manage various categories of health personnel working with him/her.
4. Organize health care services, routine and for special groups and during period of special needs such as disasters/ calamities and epidemics.

### Specific Objective

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 National and International levels and its historical perspectives.
2. Know the principles of nutrition, maternal health, and family welfare and put the same into 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 trails.
4. Know the principles of Communicable and Non-communicable diseases control and assist in the implementation of National Health programmes at a peripheral level.
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 programmes aimed at improving health status.
7. Assess specific health situations in a population, plan, organize, implement and evaluate programs aimed at improving health situations.
8. Identify the health needs of the special groups within populations especially the aged, the disabled and the worker and to respond to that need.
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. To understand principles of management and develop leadership qualities.
12. Identify the role of the Government, Private and Voluntary Sector in health and understand the principles innovations in health practices and research.

### Course Contents

#### Health Systems in India and The World - Historical Perspective-

1. History of Public Health in India
  - History of Health Services in India
  - Indigenous System of Medicines in India
  - Bhore Committee's and other Committee Reports on health services, health care, and health professional education in India
  - National health policy
  - An update of achievements of the country vis-à-vis the health for all indicators
2. Primary Health Care
  - Concept of Primary Health Care
  - Principles of primary health care
  - Elements of primary health care
  - Models of Delivery of primary health care
  - Current status of primary health care the world over

### 3. The Health Care System in India - Structure and Function

- Central Level
- State Level
- District Level
- Taluka Level
- Primary Health Centre Level
- Village Level
- Urban Level

#### **Socio Cultural Dimensions in Health**

1. Principles of Sociology and the Behavioral Sciences
  - Concept of Sociology and Behavioral Sciences
  - Influence of Social and Cultural Factors on Health and Disease.
  - Social structures and social organization
2. Principles of Social Psychology
  - Principles of Psychology
  - Principles of behavioral sciences
  - Principles of social anthropology
3. Application of Sociology in Health and Development
  - Social problems in health and disease
  - Use of Sociology in addressing problems in Health and Disease

#### **Principles of Educational Science and Technology**

- Curriculum Planning, Educational Objective
- Principles of Learning
- Teaching /Learning Methods
- Teaching skills including Micro teaching
- Preparation and use of teaching Aids and learning research materials
- Methods of Evaluation

#### **Principles and Practice of Information, Education and Communication**

1. Principle of IEC Health Education
  - Objectives of Health Educations
  - Content of Health Educations
2. Communications Skills
  - Principles of Communications
  - Communications blocks
  - Body language
3. The use of Media for IEC
4. Practice (Methods) of EIC and its application in Community Health
5. Evaluation of impact

#### **Principles of Nutrition and Applied Nutrition**

1. Nutrients, Daily requirements, Balanced Diet, Primordial Prevention of lifestyle related disease.
  - Classification of Foods
  - Daily requirements of Nutrients
  - Balanced Diet
  - Nutritional Profiles of Major Foods
2. Nutritional Deficiencies
  - Nutritional requirements

- Protein Energy Malnutrition
  - Vitamin Deficiencies
  - Mineral Deficiencies
  - Deficiencies of TRACE elements
3. Assessment of Nutritional status in a community and approach to a programme
    - Assessment of an individual's Nutritional status
    - Assessment of Community Nutritional status
  4. Nutritional Programmes in India Critical review
    - Nutritional problems in India
    - Programmes to combat these problems
    - Nutritional surveillance
    - Social problems in Nutrition
  5. Other aspects of Nutritions
    - Food Borne Diseases
    - Food Hygiene
    - Food Adulteration including PFA Act

### **Principles of Environmental Health**

#### **1. Water**

- Sources of Water
- Water Pollution
- Purification water
- Water borne disease - Epidemiology and control investigation of outbreak of water borne disease and report including water testing.

#### **2. Air**

- Indices of thermal comfort
- Air Pollution including monitoring
- Effects of air pollution and prevention and control
- Ventilation

#### **3. Housing including domestic and industrial housing standards**

#### **4. Noise and noise pollution**

#### **5. Radiation**

#### **6. Meteorological Environment including temperature, humidity and rainfall**

#### **7. Lighting**

#### **8. Disposal of Waste and Sanitation**

- Sources and Classification of Wastes
- Disposal of Solid Wastes
- Excreta Disposal
- Sewage Treatment
- Health care and Hospital Waste Management

#### **9. Environmental Pollution**

- Sources of Environmental Pollution
- Monitoring of Environmental Pollution
- Prevention and Management of Environmental Pollution

#### **10. Medical Entomology**

- Insects: Mosquito, Flies, Lice, Fleas and Bugs
- Arachnida: Ticks and Mites
- Crustacea: Cyclopa
- Identification of the arthropods
- Diseases transmitted by arthropods

- Control of Arthropods and diseases borne by them
- Insecticides and insecticide resistance
- Rodents and anti rodent measures
- Integrated Vector Control

### **Maternal Health, Child Health and Family Welfare**

1. Common Maternal and child health problems at an individual level
  - Antenatal care
  - Risk approach
  - Antenatal visits
  - Preventive Services
  - Postnatal care
  - Care of Mother
  - Child health problem
  - Low birth weight
  - Growth and development
  - Childhood infections
  - Care of the infant
2. Genetics and Health
  - Common genetic problems
  - Management of Genetic Problems
  - Preventive and Social Measures in Genetics
3. Structure of MCH and Family Welfare Services in India
  - Problems of Maternal Health in India
  - Delivery of Maternal and child health services
  - Trends in the MCH services
  - MCH related programmes in India e.g. RCH, CSSM, ICDS
  - Family Planning
  - Methods of Family Planning
  - Indicators of MCH care.
4. Demographic trends in India
  - Demographic cycle
  - Trends in the world
  - Demography related indicators
  - Demographic trends in India
5. School Health services
  - Objectives
  - Components of school health services
  - Planning of school health services
  - Care of handicapped children
  - Behavioural and learning problems in children
6. Social Paediatrics
  - Juvenile Delinquency
  - Child abuse
  - Child labour
  - Street children
  - Child guidance clinic
  - Child marriage
  - Child placement

## Principles and Applications of Epidemiologic Methods in Health Research

1. Research Methodology
2. Principles of Epidemiology
3. Epidemiological studies
  - Descriptive
  - Analytical
  - Experimental

### Biostatistics

- Collection/Organization of data / measurement scales.
- Presentation of Data
- Measurement of central tendency
- Measures of Variability
- Sampling and planning of health survey
- Probability, Normal distribution and inductive statistics
- Estimating population values
- Test of significance (Parametric/ Non-parametric including qualitative methods)
- Analysis of variance
- Association, Correlation and regression
- Vital statistics
- Evaluation of health and measurement of morbidity / mortality
- Life table and its uses
- Use of computers
- Census

### Principles of Tropical Medicine

1. Infectious and non-infectious disease epidemiology
  - Respiratory diseases such as small pox, Measles, Mumps, Rubella
  - Diphtheria, pertussis, influenza, Tuberculosis, ARI etc.
  - Intestinal infections such as Poliomyelitis, Hepatitis, Food poisoning, Cholera, Enteric Fever, Amoebiasis, Worm infestations etc
  - Arthropod borne infections such as Malaria, Falaria, Dengue and others
  - Zoonotic Diseases such as brucellosis, rickettsial, diseases, parasitic
  - Surface infectious including AIDS.STDs, Leprosy, Tetanus, Trachoma among others
  - Non-infectious diseases of public health importance
  - Cardiovascular diseases, diabetes, blindness, accidents, cancers.
2. National Health Programs
 

The origin, historical development, interventions, current state and critique of the different National Health Programmes-

National Family Welfare Programme (NFWP)

  - National Tuberculosis Control Programme
  - National Leprosy Eradication programme
  - National Diarrhoeal Diseases control Programme
  - National Malaria Eradication programme
  - National Filariasis control programme
  - National Acute Respiratory infections (ARI) Control programme
  - National AIDS control Programme
  - National Guinea Worm Eradication Programme
  - National Kala Azar Control Programme
  - National Japanese Encephalitis (JE) control programme

- National Iodine Deficiency Disorders (DD) control programme
- National programme for the control of blindness
- National Cancer control programme
- National Mental Health Programme
- National Diabetes Control Programme
- Child survival and safe motherhood (CSSM)
- Reproductive Child Health (RCH)
- Universal Immunization programme (UIP)
- National water supply and sanitation programme
- Minimum needs programme

The implementation of NHPs at a programme level and in the community.

### **Community Mental Health**

1. Principles of Mental Health
  - Types, Causes, and Warning Signals of Mental illness.
  - Preventive aspects of mental health
2. The approach to mental health problems in a community
  - Primary health care approach to mental health problems
  - Mental health services in the country

### **Occupational Health**

1. Principles of Occupational Health
  - Occupational Environment
  - Occupational Hazards
  - Absenteeism
  - Problems of industrialization
  - Health protection of workers
  - Prevention of Occupational diseases
2. Legislation in Occupational Health
  - Factories Act
  - Employees state insurance Act
  - Workman's compensation Act
  - Mines Act
  - Plantation Labour Act
3. Basic of Industrial Toxicology
4. Principles of Industrial Psychology
5. Basic of Ergonomics

### **Health Care of The Aged and The Disabled**

1. Community Geriatrics
  - Implications of demographic changes in Indian population
  - Health problems of the aged
  - Preventive health services for the aged
2. The disabled and Rehabilitation
  - Problem of disabled in the country
  - Types of disabilities and their management
  - Rehabilitation of the disabled
  - Community based Rehabilitation

## Health care of Tribal people

Desert Medicine

### Voluntary Sector in Health

1. Role of the Voluntary Sector in Health
  - Activities undertaken by Vos in the health sector
  - Activities of specific VOS in health
  - Innovative approaches in the voluntary efforts in health

### Health Care Administration and Health Management

1. Principles of Planning and Evaluation
  - Plan formulation
  - Execution
  - Evaluation
  - Planning cycle
2. Health Management
  - Methods and Techniques of Health Management
  - Behavioural Sciences in Management
  - Quantitative methods in Health Management
3. Basic of health system research
4. Basic of health economics
5. Basic of health information system

### Recent Advances and Topics of Current Interest

1. Rational drug policy
2. Computers in Health
3. Agricultural Medicine and plantation health
4. Introduction to Counseling
5. Community Ophthalmology
6. Qualitative Research
7. Disaster Management and Public Health emergencies
8. Nosocomial infection and hospital infection control
9. Others free topic

### Course Contents for Practicals

1. Microbiology applied to public health (dept. of Microbiology)
  - Hands on experience in staining techniques and interpretation of -
    - Leishmann Stain
    - Grams stain
    - JSB stain
    - Alberts stain
    - Ziehl-Neilson stain
    - Peripheral blood examination of Thick and Thin smears and reporting
    - Microscopic examination of stools and interpretation
    - Collection and Dispatch of samples to Laboratory
    - Experience in the collection, examination and interpretation of simple laboratory tests on blood, stool and urine
    - Interpretation of commonly used serological tests such as Widal/HIV/Hepatitis B/VDRL/Viral antibody titres
2. Medical Entomology
  - Collection of mosquitoes/fleas/ticks/others
  - Hands on experience on mounting and reporting



- Entomological survey
- 3. Epidemiological Exercises and case studies (including family studies) to illustrate principles and practices of Community Health.
  - Statistical exercises to illustrate principles and practice
  - Investigation of an Outbreak of a disease and Measures to control
- 4. Exercises in Public Health Administration
  - Planning exercises
  - VED Analysis etc
  - Beneficiary need Analysis
  - Preparation of Annual plan
  - Budgeting of the PHC level
  - Supervision of a PHC/SC
  - Requirement of Vaccines medicine, stationary at the PHC level
  - Organization of a family welfare camp
  - Conduction of an Immunization camp
- 5. Diet and Nutritional survey of a community
  - Collection and Dispatch of Flood samples
- 6. Study of Environment and its influence on health in
  - Work place
  - House hold
  - Community
  - This includes the study of air pollution, noise pollution, temperature, humidity and other meteorological factors and their effect on health
- 7. Study of sanitation problems to illustrate the principles and practices of community health.
- 8. Environment Sanitation
  - Collection of water sample / analysis / reporting
  - Analysis of physical, Chemical and Microbiological quality of water
  - Study of waste Management methods
  - Adaptation of water supply Methods and waste disposal methods to an industry or plantation setting
  - Study of requirement of water in Urban and rural setting
- 9. Visit / Postings to the following institutions
  - District Health Office
  - District Hospital
  - Taluka Hospital
  - PHC/HC/CHC
  - Field Publicity Office
  - ICDS office/ Anaganwadi center
  - Public Health Laboratory
  - Sewage treat plant
  - HUDCO
  - Vector control center (Hosur)
  - Meteorology department
  - Age large NGO
  - UFWC family welfare campus
  - Infectious disease hospital
  - Malaria /DTC/filarial units
  - National tuberculosis institute

- Leprosorium
- Malaria research center
- Polio surveillance office
- Visit to factory / inspectorate of factories
- Home for the age
- Blindness rehabilitation school
- Deaf and dumb schools
- Spastic society
- Physically handicapped center
- Market place
- Slaughter house
- Hotel
- Milk dairy
- Cinema house
- Food and beverages processing units

#### **Posting to Obstetric and Gynecology**

1. Obstetrics (Urban and Rural Health Center)
  - Antenatal care
  - High risk pregnancy
  - Intranatal care - the management of normal labour
  - Postnatal care
  - Family welfare
2. Gynecology
  - Adolescent health
  - Reproductive tract infections
  - Cancer of the reproductive tract especially carcinoma cervix

#### **Posting to Paediatrics (Hospital and ICDS)**

- Paediatrics infectious diseases
- Nutritional problems
- Immunization
- Neonatal problems
- Growth and development monitoring

#### **Training activities**

The entire training and the facilitation of the learning process will be aided through the following methods of learning:

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. Supervised Training of undergraduates including lesson planning
9. Involvement in specific Departmental project works
10. Conducting of surveys

#### **Methods of Monitoring (Please see chapter IV also)**

1. Self Evaluation Through daily work diary
2. Faculty evaluation through scrutiny of work diary by Head of Dept. and P.G. Guide.

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

**Dissertations (Guideline to Student) (Please see also S.L. No. 9 Chapter No. 1)**

- Step 1 Identifying guide and coguide
- Step 2 Review of available literature
- Step 3 Shortlisting of topic of interest
- Step 4 Workup in details 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 month after the date of admission and as notified by the University
- Step 7 Preparation of study instrument
- Step 8 Pilot Surveys
- 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 submission of dissertation to Registrar Evaluation
- Step 14 Preparation prior to university examination as notified by the University

**Scheme Of Examination**

**A. Theory written examination**

There shall be four question papers, each of three hours duration. Each Paper shall consist of two long essay questions each question carrying 20 marks and six short essay questions each carrying 10 marks. Total marks for each paper will be 100. Questions on recent advances may be asked in any or all the papers.

**Paper I:**

- History of Public Health and Community Medicine
- Behavioural sciences and health
- Information, Education, Communication and Counseling
- Microbiology including Entomology, Parasitology & Immunology.
- Environmental health and ecology
- General Epidemiology, Biostatistics and research Methodology

**Paper II**

- Diet and nutrition in health and disease.
- Epidemiology of communicable diseases and Non-communicable diseases.
- Occupational Health

**Paper III**

- Maternal Health & Child Health
- Demography & Family Welfare.
- Cares of special groups viz. school health, adolescent health, and Geriatrics.
- Care of disabled, Community based Rehabilitation Tribal health, Desert Medicine
- Public health emergencies and calamities.

**Paper IV**

- Health and hospital administration
- Health care delivery including National health programmes
- Public Health legislation.
- Genetics and Counseling
- Mental Health
- International Health
- Voluntary Health Organisations, NGOs

**B. Practical 200 Marks****1. Family Study:( One) 100 marks**

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:

Management at individual, family, and community levels.

**2. Clinico-social case study One long (30) One short (25)**

Basic clinical presentation and discussion of diagnosis, treatment and Management of common communicable or non-communicable Diseases/conditions with emphasis on social and community aspects.

**3. Public Health Laboratory (Two) (25 marks)**

Staining of smears, interpretation of common serological diagnostic tests, & milk analysis or interpretation of given results of any above tests.

**4. Problem on Epidemiology and Biostatistics (one) (50 marks)**

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

**5. Spotters (6x5) 30**

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.

**6. Pedagogy Exercise: (20 marks)**

A topic is given to each candidate along with the practical Examination question paper on the first day. Student is asked to make a Presentation on the topic on the second day for 20 minutes.

**VIVA-VOCE- (100 Marks)****1) Viva Voce Examination (100 marks)**

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

Max.Marks in M.D. Community Medicine	Theory	Practicals	Viva-voce	Total
	400	300	100	700

### Recommended books and journals

1. Maxcy Roseman John M. Last, Maxcy-Roseman Public Health & Preventive Medicine, Applied -Century-Crofts, Newyork.
2. Hobson W. The Theory and practice of public Health, Oxford Med Publication.
3. Barker D.J P, Practical Epidemiology, Churchill Livingstone
4. Park J.E. & K. Park, Text book of P. & S. M, M/S. Banarsidasm Bhanot, Jabalpur
5. Mahajan B.K. and M.C. Gupta, Text book of P& S.M., Jaypee Publications.
6. Bradford Hill, Principles of Medical Statistics, Lancet Ltd.No.7 Adam Street, Adelphine, London.,1967
7. John J. Hanlon, Public Health Administration and practice, MOSBY
8. Mac. Mahon & Pugh, Epidemiology Principles and Methods, LittleBrown& Co. Boston, U.S.A.
9. Robert S Goodheart Maulice E. Shills, Modern Nutrition in Health, K.M. Varghese & co.
10. Mawner & Karamar, Epid: An introductory Text, 1685 W.B.Sunuders Co.
11. Hunter's Diseases of Occupations, edited by P.A.B. Raffle, P.H. Adams, P.J.Baxter & W.R. Lee Edward Arnold Publishers (1994) Great Britain. J. Kishore
12. A Dictionary of Public Health, Century Publications New Delhi
13. Ghai
14. Bhaderrao.
15. Dher
16. J Kishore National Health Program
17. Clinical Epidemiology.

### Committee reports and policy documents- medical education and health policy

- \* Bhore Committee Report (1946) Health Survey & Development Committee, Govt. of India , Delhi.
- Mudaliar Committee Report (1961) **Health Survey and Planning Committee**, Govt. of India, Delhi.
- \* Shrivastav Report(1974).**Health Survices & Medical Education-A programme for immediate action,group on Medical Education and support manpower,Ministry of Health & Family Welfare**, Govt. of India New Delhi.
- ICSSR/JCMR(1981) Health for All-AN Alternative strategy-Report of Joint Study group of ICSSR/ICMR, Indian institute of education, Pune.
- National Health Policy, (1982) **Ministry of Health and Family Welfare** Govt of India New Delhi
- **Compendium of Recomm3endations of various committees on health & Development** (1943-1975) Central ureau of Health Intelligence (1985) Directorate General of Health Services, Ministry of Health and Family Planning, New Delhi
- Bajaj, J.S. etal (1990) **Draft National Educational Policy for Health Sciences**, I.J.M.E. Vol..29 No.1 & 2(Jan-August 1990)

### Journals

1. Indian Journal of Community Medicine.
2. Indian Journal of Public Health.
3. Indian Journal of Community Health.
4. Journal of Communicable Diseases.
5. Indian Journal of Maternal & Child Health.

6. Indian Journal of Preventive & Social Medicine.
7. Indian Journal of Occupational Health & Industrial Medicine.
8. Indian Journal of Medical Research.
9. National Medical Journal of India.
10. Indian Journal of Malariology.
11. Indian Journal of Environmental Health.
12. Indian Journal of Medical Education.
13. Journal of Indian Medical Association.
14. Journals of Medicine, Paediatrics, OBG, Skin & STD, leprosy, Tuberculosis & Chest Diseases (For Reference)

#### International Journals

1. WHO Publications - All
2. Journal of Epidemiology & Community Health
3. Tropical Diseases Bulletin.
4. Vaccine
5. American Journal of Public Health
6. Lancet
7. New England Journal of Medicine.

#### Additional Reading

1. Compendium of recommendations of various committees on health and Development (1943-1975) DGHS, Central Bureau of Health Intelligence, Directorate General of Health Services, min. of Health and Family Welfare, Govt of India, Nirman Bhavan New Delhi P.335
2. National Health Policy, Min. of Health & Family Welfare, Nirman Bhavan, New Delhi. 1983.
3. Santosh Kumar. The elements of Research, writing and editing 1994, Dept. of Urology, JIPMER, Pondicherry.
4. Srinivasa D.K. et al, Medical Education Principles and Practice, 1995. National Teacher Training Centre, JIPMER, Pondicherry.
5. Indian Council of Medical Research. "Policy Statement of Ethical considerations Involved in Research on Human Subjects", ICMER, New Delhi.
6. Code of Medical Ethics framed under section 33 of the Indian Medical Council Act 1956. Medical Council of India, Kotla Road, New Delhi.
7. Francis C.M. Medical Ethics, J P Publications, Bangalore, 1993
8. Indian National Science Academy, Guidelines for care and use of animals in Scientific Research, New Delhi, 1994.
9. Internal National Committee of Medical Journal Editors, Uniform requirements for Manuscripts submitted to biomedical journals, N Engl J Med 1991: 424-8
10. Kirkwood B.R. Essentials of Medical Statistics, 1 st Ed. Oxford: Blackwell Scientific Publications 1988.
11. Mahajan B.K. Methods in Bio statistics for medical students, 5 th Ed. New Delhi, Jaypee Brothers Medical Publishers, 1989.
12. Raveendran B Gitanjali. A Practical approach to PG dissertation, New Delhi, J.P. Publications, 1998.
  - 1 Hunter (Donald), **Diseases of the Occupations**, 6 th edition, Hodder and Stoughton 1978.
  - 2 Schilling (1978), **Occupational Health Practice**, Butterworth & company Great Britain.

3. Plunkett (E.R), **Occupational Diseases**, Barret Book Company, Stanford (1977)
4. Johnstone (R.T.) **Occupational Diseases and Industrial Medicine**, Saunders, Philadelphia (1960).
5. French (Geoffrey) **Occupational Health**, Medical Technical Publishers, Lancaster
6. Mayer (May R), **Occupational Health etc.** Williams and Wilkins, Baltimore (1969).
7. Government of India, Ministry of HRD, **Occupational Health: Issues of women in the Unrecognized sector**, New Delhi. (1988).
8. Plunkett (E.R) **Handbook of Industrial Toxicology**, 3 rd edition, Arnoid Publishers U.S.A.(1987).
9. Charles Wn Sharp and L Thomas Carroll, **Voluntary Inhalations of Industrial Solvents**, U.S.Department of Health, Education and Welfare, National Institute on Drug abuse. U.S.A. (1978).
10. 10 Patrick Kinnersly (1979), **The Hazards of Work, How to fight Them**, Pluto Press, U.K.
11. Plunkett (E.R) (1977), **Occupational Diseases, A Syllabus of signs and Symptoms**, Barret Book Company, Stamford, Connecticut (1977).
12. Edited by Robert J.Mc. Cunney.**Handbook of Occupational Medicine**, little Brown and Company, Boston/Toronto (1988).
13. WHO (1986) Geneva, **Early detection of Occupational Diseases.**
14. **Hunter's Diseases of Occupations**, Edited by P.A.B.Raffle, P.H. Adams, P.J.Baxter.
15. Carl Zenz (1994), **Occupational Medicine**, 3 rd Edition Mosby, U.S.A.
16. ILO Publications Geneva, **Encycloperia of Occupational Health & Safety**, (1983) 3<sup>rd</sup> Edition Vol.122.