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JAMMU & KASHMIR PUBLIC SERVICE COMMISSION
RESHAMGHAR COLONY, BAKSHI NAGAR, JAMMU

Sub:- Syllabus for the Written Test/Examination for the post of Medical Officer (Homeopathy) in Health and Medical Education Department.

Ref:- Notification No.11-PSC (DR-P) of 2017 dated 15.11.2017-advertisement of the posts.

Notice
Dated: 16-03-2018

In supersession of earlier notice dated 09.03.2018 regarding the above mentioned subject, the revised syllabus for the post of Medical Officer (Homeopathy) is hereby notified for information of all concerned candidates.

Anand 16/03.
(Sunita Anand), KAS
Secretary,
J&K Public Service Commission.

No:- PSC/DR/MO/Homeopathy/2017 Dated: 16-03-2018

Copy to:-

1. Director, Information, Jammu/Srinagar for publication of the notice in two local dailies of Jammu/Srinagar.
2. Manager, Govt. Press, Jammu for publication in an extra-ordinary Govt. Gazette.
3. Pvt. Secretary to Hon'ble Chairman, PSC for information of the Honb'le Chairman.
4. Incharge Camp Office, Srinagar for display of the same on the notice board.
5. Notice Board/Main file/Stock file.

ANATOMY

General Anatomy:

1.1. Modern concepts of cell and its components; cell division, types with their significance.

1.2. Tissues.

1.3. Genetics.

2. Developmental anatomy (Embryology):

2.1. Spermatogenesis

2.2. Oogenesis

2.3. Formation of germ layers

2.4. Development of embryogenic disk

2.5. Placenta

2.6. Development of abdominal organs

2.7. Development of cardio vascular system

2.8. Development of nervous system

2.9. Development of respiratory system

2.10 Development of body cavities

2.11 Development of uro-genital system

3. Regional anatomy:

This will be taught under the following regions:-

3.1. Head, Neck and Face, Brain

3.2. Thorax

3.3. Abdomen

3.4. Upper and Lower Extremities 3.5 Special Senses Each of the above areas will cover,-

(a) osteology
(b) syndesmology (joints)
(c) myology
(d) angiology
(e) neurology
(f) splanchnolgy (viscera and organs)
(g) surface anatomy
(h) applied anatomy
(i) radiographic anatomy

PHYSIOLOGY

I. General physiology:

1. Introduction to cellular physiology
2. Cell Junctions
3. Transport through cell membrane and resting membrane potential
4. Body fluids compartments 5 .Homeostasis

n. Body fluids:

1. Blood
2. Plasma Proteins
3. Red Blood Cells
4. Erythropoiesis
5. Haemoglobin and Iron Metabolism
6. Erythrocyte Sedimentation Rate
7. Packed Cell Volume and Blood Indices
8. Anaemia
9. Haemolysis and Fragility of Red Blood Cells
10. White Blood Cell
11. Immunity
12. Platelets
13. Haemostasis
14. Coagulation of Blood
15. Blood groups
16. Blood Transfusion
17. Blood volume
18. Reticulo-endothelial System and Tissue Macrophage
19. Lymphatic System and Lymph
20. Tissue Fluid and Oedema

III. Cardio-vascular system:

1. Introduction to cardiovascular system
2. Properties of cardiac muscle
3. Cardiac cycle
4. General principles of circulation
5. Heart sounds
6. Regulation of cardiovascular system
7. Normal and abnormal Electrocardiogram (ECG)
8. Cardiac output
9. Heart rate
10. Arterial blood pressure
11. Radial Pulse

12. Regional circulation- Cerebral, Splanchnic, Capillary, Cutaneous & skeletal muscle circulation
13. Cardiovascular adjustments during exercise

IV. Respiratory system and environmental physiology:

1. Physiological anatomy of respiratory tract
2. Mechanism of respiration : Ventilation, diffusion of gases
3. Transport of respiratory gases
4. Regulation of respiration
5. Pulmonary function tests
6. High altitude and space physiology
7. Deep sea physiology
8. Artificial respiration
9. Effects of exercise on respiration

V. Digestive system:

1. Introduction to digestive system
2. Composition and functions of digestive juices
3. Physiological anatomy of Stomach, Pancreas, Liver and Gall bladder, Small intestine, Large intestine
4. Movements of gastrointestinal tract
5. Gastrointestinal hormones
6. Digestion and absorption of carbohydrates, proteins and lipids

VI. Renal physiology and skin:

1. Physiological anatomy of kidneys and urinary tract
2. Renal circulation
3. Urine formation : Renal clearance, glomerular filtration, tubular reabsorption, selective secretion, concentration of urine, acidification of urine
4. Renal function tests
5. Micturition
6. Skin
7. Sweat
8. Body temperature and its regulation

VII. Endocrinology:

1. Introduction to endocrinology
2. Hormones and hypothalamo-hypophyseal axis
3. Pituitary gland
4. Thyroid gland
5. Parathyroid
6. Endocrine functions of pancreas
7. Adrenal cortex
8. Adrenal medulla

9. Endocrine functions of other organs

VIII. Reproductive system:

1. Male reproductive system- testis and its hormones; seminal vesicles, prostate gland,
2. Introduction to female reproductive system
3. Menstrual cycle
4. Ovulation
5. Menopause
6. Infertility
7. Pregnancy and parturition
8. Placenta
9. Pregnancy tests
10. Mammary glands and lactation
11. Fertility
12. Foetal circulation

IX. Central nervous system:

1. Introduction to nervous system
2. Neuron
3. Neuroglia
4. Receptors
5. Synapse
6. Neurotransmitters
7. Reflex
8. Spinal cord
9. Somato-sensory system and somato-motor system
10. Physiology of pain
11. Brainstem, Vestibular apparatus
12. Cerebral cortex
13. Thalamus
14. Hypothalamus
15. Internal capsule
16. Basal ganglia
17. Limbic system
18. Cerebellum - Posture and equilibrium
19. Reticular formation
20. Proprioceptors
21. Higher intellectual function
22. Electroencephalogram (EEG)
23. Physiology of sleep
24. Cerebro-spinal fluid (CSF)
25. Autonomic Nervous System (ANS)

X. Special senses:

1. Eye : Photochemistry of vision, Visual pathway, Pupillary reflexes, Colour vision, Errors of refraction

2. Ear: Auditory pathway, Mechanism of hearing, Auditory defects
3. Sensation of taste : Taste receptors, Taste pathways
4. Sensation of smell: Olfactory receptors, olfactory pathways
5. Sensation of touch

XI. Nerve muscle physiology:

1. Physiological properties of nerve fibres
2. Nerve fibre- types, classification, function, Degeneration and regeneration of peripheral nerves
3. Neuro-Muscular junction
4. Physiology of Skeletal muscle
5. Physiology of Cardiac muscle
6. Physiology of Smooth muscle
7. EMG and disorders of skeletal muscles.

BIO-CHEMISTRY

1. Carbohydrates: (Chemistry,Metabolism,Glycolysis,TCA, HMP, Glycogen synthesis and degradation, Blood glucose regulation)

2. Lipids: (Chemistry,Metabolism,Intestinal uptake, Fat transport, Utilisation of stored fat, Activation of fatty acids, Beta oxidation and synthesis of fatty acids)

3. Proteins: (Chemistry, Metabolism, Digestion of protein, Transamination, Deamination, Fate of Ammonia, Urea cycle, End products of each amino acid and their entry into TCA cycle

4. Enzymes: (Definition, Classification, Biological Importance, Diagnostic use, Inhibition)

5. Vitamins: (Daily requirements, Dietary source, Disorders and physiological role)

6. Minerals (Daily requirement, Dietary Sources, Disorders and physiological role)

7. Organ function tests

ORGANON OF MEDICINE WITH HOMOEOPATHIC PHILOSOPHY

- Basic concept of:
  - Health: Hahnemann's concept and modern concept.
  - Disease: Hahnemann's concept and modern concept.
  - Cure.
- Logic.
- Psychology.
- Aphorism.
- Homoeopathic philosophy.
- Symptomatology.
- Causations.
- Case Taking.
- Case Processing
  - Evaluation of Symptoms.
  - Miasmatic diagnosis.
  - Totality of Symptoms.
- Hahnemann Theory of Chronic Disease.
- J.H Allen's The Chronic Miasms - Psora and Pscudo-psora: Sycosis

HOMOEOPATHIC PHARMACY

I. General concepts and orientation:

1. History of pharmacy with emphasis on emergence of Homoeopathic Pharmacy.
2. Official Homoeopathic Pharmacopoeia (Germany, Britain, U.S.A., India).
3. Important terminologies like scientific names, common names, synonyms.
4. Definitions in homoeopathic pharmacy.
5. Components of Pharmacy.
6. Weights and measurements.
7. Nomenclature of homoeopathic drugs with their anomalies.

II. Raw Material: drugs and vehicles

1. Sources of drugs (taxonomic classification, with reference to utility).
2. Collection of drug substances.
3. Vehicles.
4. Homoeopathic Pharmaceutical Instruments and appliances.

III. Homoeopathic Pharmaceutics:

1. Mother tincture and its preparation - old and new methods.
2. Various scales used in homoeopathic pharmacy.
3. Drug dynamisation or potentisation.
4. External applications (Homoeopathic lotion, glycerol, liniment and ointment).
5. Doctrine of signature.
6. Posology (related aphorisms of organon of medicine).
7. Prescription.
8. Concept of placebo.
9. Pharmaconomy - routes of homoeopathic drug administration.
10. Dispensing of medicines.
11. Basics of adverse drug reactions and pharmaco-vigilance.

IV. Pharmacodynamics:

1. Homoeopathic Pharmacodynamics
2. Drug Proving and merits and demerits of Drug Proving on Humans and Animals.
3. Pharmacological study of drugs listed as below:

Group-A

1. Aconitum napellus
2. Adonis vernalis
3. Allium cepa
4. Argentum nitricum
5. Arsenicum album
6. Atropa Belladonna
7. Cactus grandiflorus
8. Cantharis vesicatoria
9. Cannabis indica
10. Cannabis sativa
11. Cinchona officinalis
12. Coffea cruda
13. Crataegus oxyacantha
14. Crotalus horridus
15. Gelsemium sempervirens
16. Glonoinum
17. Hydrastis canadensis
18. Hyoscyamus niger
19. Kali bichromicum
20. Lachesis
21. Lithium carbonicum
22. Mercurius corrosivus
23. Naja tripudians
24. Nitricum acidum
25. Nux vomica
26. Passiflora incarnata
27. Stannum metallicum
28. Stramonium
29. Symphytum officinale
30. Tabacum

HOMOEOPATHIC MATERIA MEDICA

- Definition of Homoeopathic Materia Medica
- Basic concept and construction of Homoeopathic Materia Medica.
- Classification of Homoeopathic Materia Medica.
- Sources of Homoeopathic Materia Medica.
- Scope and Limitations of Homoeopathic Materia Medica
- Different ways of studying homoeopathic materia medica (psycho-clinical, pathological, physiological, synthetic, comparative, analytical, remedy relationships, group study, portrait study etc.).
- Dr. Wilhelm Heinrich Theory of biochemic system of medicine.

Study of the following medicine:

- Aconitum napellus
- Aethusa cynapium
- Allium cepa
- Aloe socotrina
- Antimonium crudum
- Antimonium tartaricum
- Apis mellifica
- Argentum nitricum
- Arnica Montana
- Arsenicum album
- Arum triphyllum
- Baptisia tinctoria
- Bellis perrenis
- Bryonia alba
- Calcarea carbonica
- Calcarea fluorica
- Calcarea phosphoric
- Calcarea sulphurica
- Calendula officinalis
- Chamomilla
- Cina
- Cinchona officinalis
- Colchicum autumnale
- Colocynthis
- Drosera

- Dulcamara
- Euphrasia
- Ferrum phosphoricum
- Gelsemium
- Hepar sulph
- Hypericum perforatum.
- Ipecacuanha
- Kali muriaticum
- Kali phosphoricum
- Kali sulphuricum
- Ledum palustre
- Lycopodium clavatum
- Magnesium phosphoricum
- Natrum muriaticum
- Natrum phosphoricum
- Natrum sulphuricum
- Nux vomica
- Pulsatilla
- Rhus toxicodendron
- Ruta graveolens
- Silicea
- Spongia tosta
- Sulphur
- Symphytum officinale
- Thuja occidentalis.
- Abies canadensis
- Abies nigra
- Carbo animalis
- Carbolic acid
- Cundurango
- Fluoricum acidum
- Hydrastis canadensis
- Raphanus sativus
- Magnesia carbonica
- Magnesia muriatica
- Anthracinum
- Bacillinum
- Lac caninum

- Lac defloratum
- Lyssin
- Medorrhinum
- Psorinum
- Pyrogenium
- Vaccininum
- Variolinum
- Hydrocotyle asiatica
- Mezereum
- Radium bromatum
- Urtica urens
- Vinca minor
- Abrotanum
- Rheum palmatum
- Sanicula aqua
- Acalypha indica
- Corallium rubrum
- Lobelia inflata
- Mephitis putorius
- Rumex crispus
- Sabadilla officinalis
- Sambucus nigra
- Squilla maritima
- Baryta muriatica
- Crataegus oxyacantha
- Lithium carbonicum
- Rauwolfia serpentina
- Caulophyllum
- Cocculus indicus
- Jonosia asoca
- Justicia adhatoda
- Ocimum sanctum
- Syzigium jambolanum
- Ratanhia peruviana
- Collinsonia canadensis
- Antimonium arsenicosum
- Sticta pulmonaria
- Asterias rubens

- Iodium
- Thyroidinum
- Argentum metallicum
- Cuprum metallicum
- Plumbum metallicum
- Zincum metallicum
- Adonis vernalis
- Kalmia latifolia
- Physostigma venenosum
- Mercurius corrosivus
- Mercurius cyanatus
- Mercurius dulcis
- Mercurius solubilis
- Mercurius sulphuricus
- Causticum
- Bacillus No. 7
- Dysentery co
- Gaertner
- Morgan pure
- Morgan gaertner
- Proteus bacillus
- Sycotic bacillus
- Additional medicines
- Aesculus hippocastanum
- Adrenal inum
- Artemesia vulgaris
- Avena sativa
- Blatta orientalis
- Carcinosin
- Carduus marianus
- Ceanothus
- Chininum arsenicosum
- Cholesterinum.
- Crocus sativus
- Helonias dioica
- Lillium tigrinum
- Sabina
- Trillium pendulum

- Viburnum opulus
- Cicuta virosa
- Ranunculus bulbosus
- Rhododendron chrysanthum
- Clematis erecta
- Sabal serrulata
- Sarsaparilla officinalis
- Coffea cruda
- Glonoine
- Coca erythroxylon
- Diphtherinum
- Erigeron canadensis
- Malandrinum
- Menyanthes
- Onosmodium
- Passiflora incarnata
- Ustilago maydis
- Stannum metallicum
- Valeriana officinalis

PATHOLOGY

- General Pathology
  1. Cell Injury and cellular adaptation
  2. Inflammation and repair (Healing).
  3. Immunity
  4. Degeneration
  5. Thrombosis and embolism
  6. Oedema
  7. Disorders of metabolism
  8. Hyperplasia and hypertrophy
  9. Anaplasia
  10. Metaplasia
  11. Ischaemia
  12. Haemorrhage
  13. Shock
  14. Atrophy
  15. Regeneration
  16. Hyperemia
  17. Infection
  18. Pyrexia
  19. Necrosis
  20. Gangrene
  21. Infarction
  22. Amyloidosis
  23. Hyperlipidaemia and lipidosis

- Systemic pathology

  - Mal-nutrition and deficiency diseases.
  - Diseases of Cardiovascular system
  - Diseases of blood vessels and lymphatics
  - Diseases of kidney and lower urinary tract
  - Diseases of male reproductive system and prostate
  - Diseases of the female genitalia and breast.
  - Diseases of eye, ENT and neck
  - Diseases of the respiratory system.
  - Diseases of the oral cavity and salivary glands.
  - Diseases of the G.I. system
  - Diseases of liver, gall bladder, and biliary ducts
  - Diseases of the pancreas (including diabetes mellitus)
  - Diseases of the haemopoetic system, bone marrow and blood
  - Diseases of glands-thymus, pituitary, thyroid, and parathyroid, adrenals, parotid.
  - Diseases of the skin and soft tissue.
  - Diseases of the musculo-skeletal system.
  - Diseases of the nervous system.
  - Leprosy

- Immunology:

1. Development of immune system
2. The innate immune system
3. Non-specific defense of the host
4. Acquired immunity
5. Cells of immune system; T cells and Cell mediated immunity; B cells and Humoral immunity
6. The compliment system
7. Antigen; Antibody; Antigen - Antibody reactions (Anaphylactic and Atopic); Drug Allergies
8. Hypersensitivity
9. Immuno-deficiency
10. Auto-immunity

- Bacteriology:

1. Bacterial structure, growth and metabolism
2. Bacterial genetics and bacteriophage
3. Identification and cultivation of bacteria.
4. Gram positive aerobic and facultative anaerobic cocci, eg. Streptococci, Pneumococci.

- Fungi and Parasites:

  - Fungi - (1) True pathogens (cutaneous, sub-cutaneous and systemic infective agents), (2) Opportunistic pathogens.

  - Protozoa - (1) Intestinal (Entamoeba histolytica, Giardia lamblia, Cryptosporidum parvum), (2) Urogenital (Trichomonas vaginalis) 3) Blood and Tissues (Plasmodium- species, Toxoplasma gondii, Trypanosoma species, leishmania species).

  - Helminths - (1) Cestodes (tapeworms)- Echinococcus granulosus, Taenia solium, Taenia saginata, (2) Trematodes (Flukes): Paragonimus westermani, Schistosoma mansoni, Schistosoma haematobium (3) Nematodes- Ancylostoma duodenale, Ascaris lumbricoides, Enterobius vermicularis, Strongyloides, Stercoralis, Trichuris trichiura, Brugia malayi, Dracunculus medinensis, Loa loa, Onchocerca volvulus, Wuchereria bancroftii).

- Virology:

1. Nature and classification of viruses
2. Morphology and replication of viruses
3. DNA viruses.
4. RNA viruses.

FORENSIC MEDICINE AND TOXIOCOLOGY

O Personal identification

(a) Determination of age and sex in living and dead; race, religion.
(b) Dactylography, DNA finger printing, foot print.
(c) Medico-legal importance of bones, scars and teeth, tattoo marks, handwriting, anthropometry.
(d) Examination of biological stains and hair.

O Post-mortem examination (autopsy)

(a) Purpose, procedure, legal bindings; difference between pathological and medico-legal autopsies.

(b) External examination, internal examination of adult, foetus and skeletal remains.

O Sexual Offences

Rape, incest, sodomy, sadism, masochism, tribadism, bestiality, buccal coitus and other sexual perversions.

O Clinical toxicology

(a) Types of Poisons:

i. Corrosive poisons (Mineral acids, Caustic alkalis, Organic acids, Vegetable acids)
ii. Irritant poisons (Organic poisons - Vegetable and animal; Inorganic poisons - metallic and non-metallic; Mechanical poisons).
iii. Asphyxiant poisons (Carbon monoxide; Carbon dioxide; Hydrogen sulphide and some war gases)
iv. Neurotic poisons (Opium, Nux vomica, Alcohol, Fuels like kerosene and petroleum products, Cannabis indica, Dhatura, Anaesthetics Sedatives and Hypnotics, Agrochemical compounds, Belladonna, Hyoscyamus, Curare, Conium)
v. Cardiac poisons (Digitalis purpurea, Oleander, Aconite, Nicotine)
vi. Miscellaneous poisons (Analgesics and Antipyretics, Antihistaminics, Tranquillisers, antidepressants, Stimulants, Hallucinogens, Street drugs etc.).

GYNAECOLOGY AND OBSTETRICS

- **Gynecology**

1. Gynecological examination and diagnosis.
2. Developmental anomalies
3. Uterine displacements.
4. Sex and intersexuality.
5. Infections and ulcerations of the female genital organs.
6. Injuries of the genital tract.
7. Disorders of menstruation.
8. Menorrhagia and dysfunctional uterine bleeding.
9. Disorders of female genital tract.
10. Diseases of breasts
11. Sexually transmitted diseases
12. Endometriosis and adenomyosis.
13. Infertility and sterility

- Obstetrics

1. Fundamentals of reproduction.
2. Development of the intrauterine pregnancy-placenta and foetus.
3. Diagnosis of pregnancy-investigations and examination.
4. Antenatal care.
5. Vomiting in pregnancy.
6. Preterm labour and post maturity.
7. Normal labour and puerperium
8. Induction of labour
9. Postnatal and puerperal care,.
10. Care of the new born.
11. High risk labour; mal-positions and mal-presentations; twins, prolapse of cord and limbs, abnormalities in the action of the uterus; abnormal conditions of soft part contracted pelvis; obstructed labour, complications of 3rd stage of labour, injuries of birth canal, foetal anomalies.

SURGERY

General Surgery:-

1. Introduction to surgery and basic surgical principles.
2. Fluid, electrolytes and acid-base balance.
3. Hemorrhage, hemostasis and blood transfusion.
4. Boil, abscess, carbuncle, cellulitis and erysipelas.
5. Acute and chronic infections, tumors, cysts, ulcers, sinus and fistula.
6. Injuries of various types; preliminary management of head injury
7. Wounds, tissue repair, scars and wound infections.
8. Special infections (Tuberculosis, Syphilis, Acquired Immuno Deficiency Syndrome, Actinomycosis, Leprosy).
9. Burn
10. Shock
11. Nutrition
12. Pre-operative and post-operative care.
13. General management, surgical management and homoeopathic therapeutics of the above topics will be covered.

Systemic Surgery:-

1. Diseases of blood vessels, lymphatics and peripheral nerves
2. Diseases of glands
3. Diseases of extremities
4. Diseases of thorax and abdomen
5. Diseases of alimentary tract
6. Diseases of liver, spleen, gall bladder and bile duct.
7. Diseases of abdominal wall, umbilicus, hernias.
8. Diseases of heart and pericardium.
9. Diseases of urogenital system.
10. Diseases of the bones, cranium, vertebral column, fractures and dislocations.
11. Diseases of the joints.
12. Diseases of the muscles, tendons and fascia.

Ear

1. Applied anatomy and applied physiology of ear
2. Examination of ear
3. Diseases of external, middle and inner ear

Nose

1. Applied anatomy and physiology of nose and paranasal sinuses.
2. Examination of nose and paranasal sinuses
3. Diseases of nose and paranasal sinuses

Throat

1. Applied Anatomy and applied Physiology of pharynx, larynx, tracheobronchial tree, oesophagus
2. Examination of pharynx, larynx, tracheobronchial tree, oesophagus
3. Diseases of Throat (external and internal).
4. Diseases of esophagus

Ophthalmology

1. Applied Anatomy, Physiology of eye
2. Examination of eye.
4. Diseases of eyelids, eyelashes and lacrimal drainage system.
5. Diseases of Eyes including injury related problems.

REPERTORY

1. Repertory: Definition; Need; Scope and Limitations.
2. Classification of Repertories
3. Study of different Repertories (Kent, Boenninghausen, Boger-Boenninghausen):
   (a) History
   (b) Philosophical background
   (c) Structure
   (d) Concept of repertorisation
   (e) Adaptability
   (f) Scope
   (g) Limitation(s)
4. Gradation of Remedies by different authors.
5. Methods and techniques of repertorisation. Steps of repertorisation.
6. Terms and language of repertories (Rubrics) cross references in other repertories and materia medica.
7. Conversion of symptoms into rubrics and repertorisation using different repertories.
8. Repertory - its relation with organon of medicine and materia medica.
9. Case taking and related topics:
   (a) case taking.
   (b) difficulties of case taking, particularly in a chronic case.
   (c) types of symptoms, their understanding and importance.
   (d) importance of pathology in disease diagnosis and individualisation in relation to study of repertory.
10. Case processing

    (a) analysis and evaluation of symptoms

    (b) miasmatic assessment

    (c) totality of symptoms or conceptual image of the patient

    (d) repertorial totality

    (e) selection of rubrics

    (f) repertorial technique and results

    (g) repertorial analysis

COMMUNITY MEDICINE

1. Man and Medicine
2. Concept of health and disease in conventional medicine and homeopathy.
3. Nutrition and Health

   a) Food and nutrition.
   b) Food in relation to health and disease.
   c) Balanced Diet
   d) Nutritional deficiencies and Nutritional survey.
   e) Food processing
   f) Pasteurization of milk
   g) Adulteration of food
   h) Food poisoning

4. Environment and health

   (a) air, light and sunshine, radiation.
   (b) effect of climate
   (c) comfort zone
   (d) personal hygiene
   (e) physical exercise
   (f) sanitation of fair and festivals
   (g) disinfection and sterilisation
   (h) atmospheric pollution and purification of air
   (i) air borne diseases

5. Water

   (a) distribution of water; uses; impurities and purification
   (b) standards of drinking water
   (c) water borne diseases
   (d) excreta disposal
   (e) disposal of deceased.
   (f) disposal of refuse.
   (g) medical entomology- insecticides, disinfection, Insects in relation to disease, Insect control.

6. Occupational health

7. Preventive medicine in pediatrics and geriatrics.

8. Epidemiology

   (a) Principles and methods of epidemiology

   (b) Epidemiology of communicable diseases:
   - General principles of prevention and control of communicable diseases;
   (c) Communicable diseases: their description, mode of spread and method of prevention.
   (d) Protozoan and helminthic infections- Life cycle of protozoa and helminthes, their prevention.
   (e) Epidemiology of non-communicable diseases: general principles of prevention and control of non- communicable diseases
   (f) Screening of diseases

9. Bio-statistics

   a) Need of biostatistics in medicine

   b) Elementary statistical methods
   c) Sample size calculation
   d) Sampling methods.
   e) Test of significance
   f) Presentation of data
   g) Vital statistics

10. Demography and Family Planning; Population control; contraceptive practices; National Family Planning Programme.
11. Health education and health communication
12. Health care of community.
13. International Health
14. Mental Health
15. Maternal and Child Health
16. School Health Services
17. National Health Programs of India including Rashtriya Bal Chikitsa Karyakram.
18. Hospital waste management
19. Disaster management

PRACTICE OF MEDICINE

1. Applied anatomy and applied physiology of the respective system as stated below.
2. Respiratory diseases.
3. Diseases of digestive system and peritoneum.
4. Diseases concerning liver, gall-bladder and pancreas.
5. Genetic Factors (co-relating diseases with the concept of chronic miasms).
6. Immunological factors in diseases with concept of susceptibility (including HIV, Hepatitis-B)
7. Disorders due to chemical and physical agents and to climatic and environmental factors.
8. Knowledge of clinical examination of respective systems.
9. Water and electrolyte balance - disorders
10. Nutritional and metabolic diseases
11. Diseases of haemopoietic system.
12. Endocrinal diseases.
13. Infectious diseases.
14. Diseases of cardiovascular system.
15. Diseases of urogenital Tract.
16. Disease of CNS and peripheral nervous system.
17. Psychiatric disorders.
18. Diseases of locomotor system (connective tissue, bones and joints disorders)
19. Diseases of skin and sexually transmitted diseases.
20. Tropical diseases.
21. Paediatric disorders.
22. Geriatric disorders.
23. Applied anatomy and applied physiology of different organ and systems relating to specific diseases.
24. Knowledge of clinical examination of respective systems.