Syllabus, BHMS Degree Level Standard

ANATOMY

The curriculum includes the following, namely:-

1. 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

4. Histology (Microanatomy):

PHYSIOLOGY

The curriculum includes the following, namely:–

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

II. 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. 3. Properties of cardiac muscle Cardiac cycle General principles of circulation Heart sounds Regulation of cardiovascular system Normal and abnormal Electrocardiogram (ECG) Cardiac output 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:

Physiological anatomy of respiratory tract, Mechanism of respiration : Ventilation, diffusion of gases Transport of respiratory gases Regulation of respiration, Pulmonary function tests, High altitude and space physiology, Deep sea physiology, Artificial respiration, Effects of exercise on respiration.

V. Digestive system:

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

VI. Renal physiology and skin:

Physiological anatomy of kidneys and urinary tract ,Renal circulation, Urine formation , Renal clearance, glomerular filtration, tubular reabsorption, selective secretion, concentration of urine, acidification of urine, Renal function tests, Micturition, Skin Sweat Body temperature and its regulation

VII. Endocrinology:

Introduction to endocrinology, Hormones and hypothalamo-hypophyseal axis, Pituitary gland ,Thyroid gland , Parathyroid, Endocrine functions of pancreas, Adrenal cortex, Adrenal medulla, Endocrine functions of other organs

VIII. Reproducative system:

Male reproductive system- testis and its hormones; seminal vesicles, prostate gland, semen. Introduction to female reproductive system ,Menstrual cycle, Ovulation, Menopause, Infertility, Pregnancy and parturition ,Placenta, Pregnancy tests Mammary glands and lactation ,Fertility , 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) 72 THE GAZETTE OF INDIA : EXTRAORDINARY [PART III—SEC. 4] 23. Physiology of sleep 24. Cerebro-spinal fluid (CSF) 25. Autonomic Nervous System (ANS)

X. Special senses:

Eye : Photochemistry of vision, Visual pathway, Pupillary reflexes, Colour vision, Errors of refraction 1. Ear: Auditory pathway, Mechanism of hearing, Auditory defects Sensation of taste : Taste receptors, Taste pathways. Sensation of smell : Olfactory receptors, olfactory pathways 5. Sensation of touch

XI. Nerve muscle physiology:

Physiological properties of nerve fibres,Nerve fibre- types, classification, function, Degeneration and regeneration of peripheral nerves ,Neuro-Muscular junction, Physiology of Skeletal muscle Physiology of Cardiac muscle, Physiology of Smooth muscle, EMG and disorders of skeletal muscles

XII. Bio-physical sciences:

Filtration,. Ultra filtration, Osmosis ,Diffusion ,Adsorption, Hydrotropy Colloid Donnan Equilibrium Tracer elements , Dialysis ,Absorption ,Assimilation ,Surface tension

BIO-CHEMISTRY

A. Theory:

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

1. Introductory lectures

1.1. Evolution of medical practice of the ancients (Prehistoric Medicine, Greek Medicine, Chinese medicine, Hindu medicine and Renaissance) and tracing the empirical, rationalistic and vitalistic thoughts. 1.2. Short history of Hahnemann's life, his contributions, and discovery of Homoeopathy, situation leading to discovery of Homoeopathy 1.3. Brief life history and contributions of early pioneers of homoeopathy like C.V. Boenninghausen, J.T. Kent, C. Hering, Rajendra Lal Dutta, M.L. Sircar 1.4. History and Development of Homoeopathy in India, U.S.A. and European countries 1.5. Fundamental Principles of Homoeopathy. 1.6. Basic concept of: 1.6.1. Health: Hahnemann's concept and modern concept. 1.6.2. Disease: Hahnemann's concept and modern concept. 1.6.3. Cure. 1.7. Different editions and constructions of Hahnemann's Organon of Medicine.

2. Logic To understand organon of medicine and homoeopathic philosophy, it is essential to be acquainted with the basics of LOGIC to grasp inductive and deductive reasonings. Preliminary lecturers on inductive and deductive logic (with reference to philosophy book of Stuart Close Chapter 3 and 16).

3. Psychology 3.1. Basics of Psychology. 3.2. Study of behavior and intelligence. 3.3. Basic concepts of Sensations. 3.4. Emotion, Motivation, Personality, Anxiety, Conflict, Frustration, Depression, Fear, Psychosomatic Manifestations 3.5 Dreams.

4. Aphorisms 1 to 28 of organon of medicine

5. Homoeopathic Prophylaxis

SECOND B.H.M.S.

1. Aphorisms

29-104 including foot notes of Organon of Medicine (5th & 6th Editions translated by R.E. Dudgeon and W. Boericke).

2. Homoeopathic philosophy:

2.1. Chapters of Philosophy books of J.T. Kent (Chapters 1 to17, 23 to 27, 31 to 33), Stuart Close (Chapters- 8, 9, 11, 12) and H.A. Roberts (Chapters 3, 4, 5, 6, 8, 9, 11, 17, 18, 19, 20), related to Aphorisms 29-104 of Organon of Medicine 2.2. Symptomatology: Details regarding Symptomatology are to be comprehended by referring to the relevant aphorisms of organon of medicine and chapters of the books on homoeopathic philosophy. 2.3. Causations: Thorough comprehension of the evolution of disease, taking into account pre-disposing, fundamental, exciting and maintaining causes.

2.4. Case taking: The purpose of homoeopathic case taking is not merely collection of the disease symptoms from the patient, but comprehending the patient as a whole with the correct appreciation of the factors responsible for the genesis and maintenance of illness. Hahnemann's concept and method of case taking, as stated in his Organon of Medicine is to be stressed upon. 2.5. Case processing: This includes, (i) Analysis of Symptoms, (ii) Evaluation of Symptoms, (iii) Miasmatic diagnosis, (iv) Totality of symptoms

THIRD B.H.M.S.

1. Hahnemann's Prefaces and Introduction to Organon of Medicine.

2. Aphorisms 105 to 294 of Hahnemann's Organon of Medicine, including foot notes (5th and 6th Editions translated by R.E. Dudgeon and W. Boericke) 3. Chapters of Philosophy books of J.T. Kent (Chapters- 28, 29, 30, 34 to 37), Stuart Close (Chapters- 7, 10, 13, 14, 15) & H.A. Roberts (Chapters- 7, 10, 12 to 19,21, 34) related to 105-294 Aphorisms of Organon of medicine

FOURTH B.H.M.S.

1. Evolution of medical practice of the ancients (Prehistoric Medicine, Greek Medicine, Chinese medicine, Hindu medicine and Renaissance) and tracing the empirical, rationalistic and vitalistic thoughts.

2. Revision of Hahnemann's Organon of Medicine (Aphorisms 1-294) including footnotes (5th & 6th Editions translated by R.E. Dudgeon and W. Boericke).

3. Homoeopathic Philosophy: Philosophy books of Stuart Close (Chapters- 1, 2, 4, 5, 6, 8, 17), J.T. Kent (Chapters - 18 to 22) and H.A. Roberts (Chapters- 1 to 5, 20, 22 to 33, 35), Richard Hughes (Chapters- 1 to 10) and C. Dunham (Chapters- 1 to 7).

4. Chronic Diseases: 4.1. Hahnemann's Theory of Chronic Diseases. 4.2. J.H. Allen's The Chronic Miasms – Psora and Pseudo-psora; Sycosis (a) Emphasis should be given on the way in which each miasmatic state evolves and the characteristic expressions are manifested at various levels and attempt should be made to impart a clear understanding of Hahnemann's theory of chronic miasms. (b) The characteristics of the miasms need to be explained in the light of knowledge acquired from different branches of medicine.

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 (focus on scope of Homoeopathic lotion, glycerol, liniment and ointment). 5. Doctrine of signature. 6. Posology (focus on basic principles; related aphorisms of organon of medicine). 7. Prescription (including abbreviations). 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 (related aphorisms 105 – 145 of organon of medicine) and merits and de-merits of Drug Proving on Humans and Animals. 3. Pharmacological study of drugs listed in Appendix –A

V. Quality Control: 1. Standardisation of homoeopathic medicines, raw materials and finished products. 2. Good manufacturing practices; industrial pharmacy. 3. Homoeopathic pharmacopoeia laboratory – functions and activities, relating to quality control of drugs.

VI. Legislations pertaining to pharmacy: 1. The Drugs and Cosmetics Act, 1940 (23 of 1940) {in relation to Homoeopathy}; 2. Drugs and Cosmetics Rules, 1945 {in relation to Homoeopathy ; 3. Poisons Act, 1919 (12 of 1919); 4. The Narcotic Drugs and Psychotropic Substances Act, 1985 (61 of 1985); 5. Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954 (21 of 1954); 6. Medicinal and Toilet Preparations (Excise Duties) Act, 1955 (16 of 1955).

HOMOEOPATHIC MATERIA MEDICA

FIRST B.H.M.S.

General topics of Materia Medica :-(including introductory lectures)

a) Basic Materia Medica – 1. Basic concept of Materia Medica 2. Basic construction of various Materia Medicas 3. Definition of Materia Medica

(b) Homoeopathic Materia Medica 1. Definition of Homoeopathic Materia Medica 2. Basic concept and construction of Homoeopathic Materia Medica. 3. Classification of Homoeopathic Materia Medica. 4. Sources of Homoeopathic Materia Medica. 5. Scope and Limitations of Homoeopathic Materia Medica.

(i) Science and philosophy of homoeopathic materia medica. (ii) Different ways of studying homoeopathic materia medica (e.g. psycho-clinical, pathological, physiological, synthetic, comparative, analytical, remedy relationships, group study, portrait study etc.) (iii) Scope and limitations of homoeopathic materia medica. (iv) Concordance or remedy relationships. (v) Comparative homoeopathic materia medica, namely:- Comparative study of symptoms, drug pictures, drug relationships. (vi) Theory of biochemic system of medicine, its history, concepts and principles according to Dr. Wilhelm Heinrich Schuessler. Study of 12 biochemic medicines. (tissue remedies).

(b) **Second B.H.M.S**

I. APPENDIX-I

1. Aconitum napellus 2. Aethusa cynapium 3. Allium cepa 4. Aloe socotrina 5. Antimonium crudum 6. Antimonium tartaricum 7. Apis mellifica 8. Argentum nitricum 9. Arnica Montana 10. Arsenicum album 11. Arum triphyllum 12. Baptisia tinctoria 13. Bellis perrenis 14. Bryonia alba 15. Calcarea carbonica 16. Calcarea fluorica 17. Calcarea phosphoric 18. Calcarea sulphurica 19. Calendula officinalis 20. Chamomilla 21. Cina 22. Cinchona officinalis 23. Colchicum autumnale 24. Colocynthis 25. Drosera 26. Dulcamara 27. Euphrasia 28. Ferrum phosphoricum 29. Gelsemium 30. Hepar sulph 31. Hypericum perforatum 32. Ipecacuanha 33. Kali muriaticum 34. Kali phosphoricum 35. Kali sulphuricum 36. Ledum palustre 37. Lycopodium clavatum 38. Magnesium phosphoricum 39. Natrum muriaticum 40. Natrum phosphoricum 41. Natrum sulphuricum 42. Nux vomica 43. Pulsatilla 44. Rhus toxicodendron 45. Ruta graveolens 46. Silicea 47. Spongia tosta 48. Sulphur 49. Symphytum officinale 50. Thuja occidentalis

THIRD B.H.M.S:-

(a) concept of nosodes - definition of nosodes, types of nosodes, general indications of dosodes.

(b) concepts of constitution, temperaments, diathesis- definitions, various concepts of constitution with their peculiar characteristics, importance of constitution, temperaments and diathesis and their utility in treatment of patients. B. Concept of mother tincture.

C. Homoeopathic medicines to be taught in

APPENDIX-II - 1. Acetic acid 2. Actea spicata 3. Agaricus muscarius 4. Agnus castus 5. Alumina 6. Ambra grisea 7. Ammonium carbonicum 8. Ammonium muriaticum 9. Anacardium orientale 10. Apocynum cannabinum 11. Arsenicum Iodatum 12. Asafoetida 13. Aurum metallicum 14. Baryta carbonica 15. Belladonna 16. Benzoic acid 17. Berberis vulgaris 18. Bismuth 19. Borax 20. Bovista lycoperdon 21. Bromium 22. Bufo rana 23. Cactus grandiflorus 24. Caladium seguinum 25. Calcarea arsenicosa 26. Camphora 27. Cannabis indica 28. Cannabis sativa 29. Cantharis vesicatoria 30. Carbo vegetabilis 31. Chelidonium majus 32. Conium maculatum 33. Crotalus horridus 34. Croton tiglium 35. Cyclamen europaeum 36. Digitalis purpurea 37. Dioscorea villosa 38. Equisetum hyemale 39. Ferrum metallicum 40. Graphites 41. Helleborus niger 42. Hyoscyamus niger 43. Ignatia amara 44. Kali bichromicum 45. Kali bromatum 46. Kali carbonicum 47. Kreosotum 48. Lachesis muta 49. Moschus 50. Murex purpurea 51. Muriatic acid 52. Naja tripudians 53. Natrum carbonicum 54. Nitric acid 55. Nux moschata 56. Opium 57. Oxalic acid 58. Petroleum 59. Phosphoric acid 60. Phosphorus 61. Phytolacca decandra 62. Picric acid 63. Platinum metallicum 64. Podophyllum 65. Secale cornutum 66. Selenium 67. Sepia 68. Staphysagria 69. Stramonium 70. Sulphuric acid 71. Syphilinum 72. Tabacum 73. Taraxacum officinale 74. Tarentula cubensis 75. Terebinthina 76. Theridion 77. Thlaspi bursa pastoris 78. Veratrum album Group studies Acid group Carbon group Kali group Ophidia group Mercurius group Spider group

Fourth B.H.M.S

APPENDIX-III

1 Abies canadensis 35 Sambucus nigra 2 Abies nigra 36 Squilla maritima 3 Carbo animalis 37 Baryta muriatica 4 Carbolic acid 38 Crataegus oxyacantha 5 Cundurango 39 Lithium carbonicum 6 Fluoricum acidum 40 Rauwolfia serpentina 7 Hydrastis canadensis 41 Caulophyllum 8 Raphanus sativus 42 Cocculus indicus 9 Magnesia carbonica 43 Crocus sativus 10 Magnesia muriatica 44 Helonias dioica 11 Anthracinum 45 Lillium tigrinum 12 Bacillinum 46 Sabina 13 Lac caninum 47 Trillium pendulum 14 Lac defloratum 48 Viburnum opulus 15 Lyssin 49 Cicuta virosa 16 Medorrhinum 50 Ranunculus bulbosus 17 Psorinum 51 Rhododendron chrysanthum 18 Pyrogenium 52 Clematis erecta 19 Vaccininum 53 Sabal serrulata 20 Variolinum 54 Sarsaparilla officinalis 21 Hydrocotyle asiatica 55 Coffea cruda 22 Mezereum 56 Glonoine 23 Radium bromatum 57 Melilotus 24 Urtica urens 58 Millefolium 25 Vinca minor 59 Sanguinaria canadensis 26 Abrotanum 60 Spigelia 27 Rheum palmatum 61 Veratrum viride 28 Sanicula aqua 62 Capsicum 29 Acalypha indica 63 Cedron 30 Corallium rubrum 64 Eupatorium perfoliatum 31 Lobelia inflata 65 Abroma augusta 32 Mephitis putorius 66 Calotropis gigantea 33 Rumex crispus 67 Carica papaya 34 Sabadilla officinalis 68 Cassia sophera 69 Ficus religiosa 104 Artemesia vulgaris 70 Jonosia asoca 105 Avena sativa 71 Justicia adhatoda 106 Blatta orientalis 72 Ocimum sanctum 107 Carcinosin 73 Syzigium jambolanum 108

Carduus marianus 74 Ratanhia peruviana 109 Ceanothus 75 Collinsonia canadensis 110 Chininum arsenicosum 76 Antimonium arsenicosum 111 Cholesterinum 77 Sticta pulmonaria 112 Coca erythroxylon 79 Asterias rubens 113 Diphtherinum 80 Iodium 114 Erigeron canadensis 81 Thyroidinum 115 Malandrinum 82 Argentum metallicum 116 Menyanthes 83 Cuprum metallicum 117 Onosmodium 84 Plumbum metallicum 118 Passiflora incarnata 85 Zincum metallicum 119 Ustilago maydis 86 Adonis vernalis 120 Stannum metallicum 87 Kalmia latifolia 121 Valeriana officinalis 88 Physostigma venenosum 122 X – ray 89 Mercurius corrosivus 90 Mercurius cyanatus 91 Mercurius dulcis 92 Mercurius solubilis 93 Mercurius sulphuricus 94 Causticum 95 Bacillus No. 7 96 Dysentery co 97 Gaertner 98 Morgan pure 99 Morgan gaertner 100 Proteus bacillus 101 Sycotic bacillus Additional medicines 102 Aesculus hippocastanum 103 Adrenalinum 90 Group studies 1 Baryta group 2 Calcarea group 3 Magnesia group 4 Natrum group 5 Compositae family 6 Ranunculacae family 7 Solonacae family

PATHOLOGY

(a**). 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 24. Disorders of pigmentation 25. Neoplasia (Definition, variation in cell growth, nomenclature and taxonomy, characteristics of neoplastic cells, aetiology and pathogenesis, grading and staging, diagnostic approaches, interrelationship of tumor and host, course and management). 26. Calcification 27. Effects of radiation 28. Hospital infection

(b**) Systemic pathology** In each system, the important and common diseases should be taught, keeping in view their evolution, aetio pathogenesis, mode of presentation, progress and prognosis, namely:–

1. Mal-nutrition and deficiency diseases. 2. Diseases of Cardiovascular system 3. Diseases of blood vessels and lymphatics 4. Diseases of kidney and lower urinary tract 5. Diseases of male reproductive system and prostate 6. Diseases of the female genitalia and breast. 7. Diseases of eye, ENT and neck 8. Diseases of the respiratory system. 9. Diseases of the oral cavity and salivary glands. 10. Diseases of the G.I. system 11. Diseases of liver, gall bladder, and biliary ducts 12. Diseases of the pancreas (including diabetes mellitus) 13. Diseases of the haemopoetic system, bone marrow and blood 14. Diseases of glands-thymus, pituitary, thyroid, and parathyroid, adrenals, parotid. 15. Diseases of the skin and soft tissue. 16. Diseases of the musculo-skeletal system. 17. Diseases of the nervous system. 18. Leprosy

(c) **Microbiology**

(I) General Topics: 1. Introduction 2. History and scope of medical microbiology 3. Normal bacterial flora 4. Pathogenicity of micro-organisms 5. Diagnostic microbiology

(II) 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 11. Transplantation 12. Blood group antigens 13. Clinical aspect of immuno-pathology.

(III) 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. 5. Gram positive anaerobic cocci, e.g. peptostreptococci 6. Gram negative aerobic cocci, eg. neisseria, moraxella, kingella. 7. Gram positive aerobic bacilli, eg. corynebacterium, aacillus anthrax, cereus subtitis, mycobacterium tuberculosis, M. leprae, actinomycetes; nocardia, organism of enterobacteriac group. 8. Gram positive anaerobic bacilli, eg. genus clostridium, lactobacillus. 9. Gram negative anaerobic bacilli, eg. bacteroides, fragilus, fusobacterium. 10. Others like- cholerae vibrio, spirochaetes, leptospirae, mycoplasma, chlamydiae, rickettsiae, yersinia and pasturella.

(IV) 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).

(V) Virology: 1. Introduction 2. Nature and classification of viruses 3. Morphology and replication of viruses 4. DNA viruses: (i) parvo virus (ii) herpes virus, varicella virus, CMV, EBV. (iii) hepadna virus (hepatitis virus) (iv) papova virus (v) adeno virus (vi) pox virus- variola virus, vaccinia virus, molluscum contagiosum etc. 5. RNA viruses: (a) orthomyxo virus: (i) entero virus (ii) rhino virus (iii) hepato virus (b) paramyxo virus- rubeola virus, mumps virus, Influenza virus etc. (c) phabdo virus (d) rubella virus (german measles) (e) corona virus (f) retro virus (g) yellow fever virus (h) dengue, vhikungunya virus (i) Miscellaneous virus: (i) arena virus (ii) corona virus (iii) rota virus (iv) bacteriophages

(VI) Clinical microbiology: (1) Clinically important micro organisms (2) Immunoprophylaxis, (3) Antibiotic Sensitivity Test (ABST)

(VII) Diagnostic procedures in microbiology: (1) Examination of blood and stool (2) Immunological examinations (3) Culture methods (4) Animal inoculation.

(VIII) Infection and Disease: (1) Pathogenicity, mechanism and control (2) Disinfection and sterilisation (3) Antimicrobial chemotherapy (4) Microbial pathogenicity (d) Histopathology: 1. Teaching of histopathological features with the help of slides of common pathological conditions

from each system. 1. Teaching of gross pathological specimens for each system. 2. Histopathological techniques, e.g. fixation, embedding, sectioning and staining by common dyes and stains. 3. Frozen sections and its importance. 4. Electron microscopy; phase contrast microscopy

FORENSIC MEDICINE AND TOXIOCOLOGY

Introduction

(a) Definition of forensic medicine. (b) History of forensic medicine in India. (c) Medical ethics and etiquette. (d) Duties of registered medical practitioner in medico-legal cases.

2. Legal procedure (a) Inquests, courts in India, legal procedure. (b) Medical evidences in courts, dying declaration, dying deposition, including medical certificates, and medico-legal reports.

3. 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.

4. Death and its medico-legal importance (a) Death and its types, their medico-legal importance (b) Signs of death (1) immediate, (2) early, (3) late and their medico-legal importance (c) Asphyxial death (mechanical asphyxia and drowning). (d) Deaths from starvation, cold and heat etc.

5. Injury and its medico-legal importance Mechanical, thermal, firearm, regional, transportation and traffic injuries; injuries from radiation, electrocution and lightening.

6. Forensic psychiatry (a) Definition; delusion, delirium, illusion, hallucinations; impulse and mania; classification of Insanity. (b) Development of insanity, diagnosis, admission to mental asylum.

7. 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.

8. Impotence and sterility Impotence; Sterility; Sterilisation; Artificial Insemination; Test Tube Baby; Surrogate mother.

9. Virginity, defloration; pregnancy and delivery

10. Abortion and infanticide

(a) Abortion: different methods, complications, accidents following criminal abortion, MTP. (b) Infant death, legal definition, battered baby syndrome, cot death, legitimacy.

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

II. Toxicology

1. General Toxicology (a) Forensic Toxicology and Poisons (b) Diagnosis of poisoning in living and dead, (c) General principles of management of poisoning, (d) Medico-legal aspects of poisons, (e) Antidotes and types.

2. Clinical toxicology (

a) Types of Poisons: (i) Corrosive poisons (Mineral acids, Caustic alkalis, Organic acids, Vegetable acids) (ii) (iii) Irritant poisons (Organic poisons - Vegetable and animal; Inorganic poisons - metallic and non metallic; Mechanical poisons) 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.) III. Legislations relating to medical profession (a) the Homoeopathy Central Council Act, 1973 (59 of 1973);

(b) the Consumer Protection Act, 1986 (68 of 1986); (c) the Workmen's compensation Act, 1923 (8 of 1923); (d) the Employees State Insurance Act, 1948 (34 of 1948); (e) the Medical Termination of Pregnancy Act, 1971 (34 of 1971); (f) the Mental Health Act, 1987 (14 of 1987); (g) the Indian Evidence Act, 1872 (1 of 1872); (h) the Prohibition of Child Marriage Act, 2006 (6 of 2007); (i) the Personal Injuries Act, 1963 (37 of 1963) (j) the Drugs and Cosmetics Act, 1940 (23 of 1940)and the rules made therein; (k) the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954 (21 of 1954); (l) the Transplantation of Human Organs Act, 1994 (42 of 1994); (m) the Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 (57 of 1994); (n) the Homoeopathic Practitioners (Professional Conduct, Etiquette and Code of Ethics) Regulations, 1982; (o) the Drugs Control Act, 1950 (26 of 1950); (p) the Medicine and Toiletry Preparations (Excise Duties) Act, 1955 (16 of 1955); (q) the Indian Penal Code (45 of 1860) and the Criminal Procedure Code (2 of 1974) {relevant provsions) (r) the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (1 of 1996); (s) the Clinical Establishment (Registration and Regulation) Act, 2010 (23 of 2010).

REPERTORY – III BHMS

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

. Fourth B.H.M.S

1. Comparative study of different repertories (like Kent's Repertory, Boenninghausen's Therapeutic Pocket Book and Boger- Boenninghausen's Charactetristic Repertories, A Synoptic Key to Materia Medica). 2. Card repertories and other mechanical aided repertories– History, Types and Use. 3. Concordance repertories (Gentry and Knerr) 4. Clinical Repertories (William Boericke etc.) 5. An introduction to modern thematic repertories- (Synthetic, Synthesis and Complete Repertory and Murphy's Repertory) 6. Regional repertories 7. Role of computers in repertorisation and different softwares.

GYNAECOLOGY AND OBSTETRICS – II BHMS

1. Gynaecology

(a) A review of the applied anatomy of female reproductive systems-development and malformations. (b) A review of the applied physiology of female reproductive systems-puberty, menstruation and menopause. (c) Gynaecological examination and diagnosis. (d) Developmental anomalies. (e) Uterine displacements. (f) Sex and intersexuality. (g) General Management and therapeutics of the above listed topics in Gynaecology .

2. Obstetrics

(a) Fundamentals of reproduction. (b) Development of the intrauterine pregnancy-placenta and foetus. (c) Diagnosis of pregnancy-investigations and examination. (d) Antenatal care. (e) Vomiting in pregnancy. (f) Preterm labour and post maturity. (g) Normal labour and puerperium. (h) Induction of labour. (i) Postnatal and puerperal care. (j) Care of the new born. (k) Management and therapeutics of the above listed topics in obstetrics.

Third B.H.M.S

Gynaecology

(a) Infections and ulcerations of the female genital organs. (b) Injuries of the genital tract (c) Disorders of menstruation. (d) Menorrhagia and dysfunctional uterine bleeding. (e) Disorders of female genital tract. (f) Diseases of breasts. (g) Sexually transmitted diseases. (h) Endometriosis and

adenomyosis. (i) Infertility and sterility. (j) Non-malignant growths. (k) Malignancy. (l) Chemotherapy caused complications. (m) Management and therapeutics of the above listed topics in gynaecology.

2. Obstetrics

(a) 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.

(b) Abnormal pregnancies-abortions, molar pregnancy, diseases of placenta and membranes, toxemia of pregnancy, antepartum haemorrhages, multiple pregnancy, proctracted gestation, ectopic pregnancy, intrauterine growth retardation, pregnancy in Rh negative woman, intrauterine fetal death, still birth.

(c) Common disorders and systemic diseases associated with pregnancy.

d) Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994.

(e) Common obstetrical operations-medical termination of pregnancy, criminal abortion, caesarean section, episiotomy.

(f) Emergency obstetric care. (g) Population dynamics and control of conception.

(h) Infant care – neonatal hygiene, breast feeding, artificial feeding, management of premature child, asphyxia, birth injuries, common disorders of newborn.

(i) (j) Reproductive and child health care (a) safe motherhood and child survival (b) Risk approach – MCH care (c) Maternal mortality and morbidity (d) Perinatal mortality and morbidity (e) Diseases of foetus and new born. Medico-legal aspects in obstetrics.

(k) Homoeopathic Management and Therapeutics of the above listed clinical conditions in Obstetrics.

COMMUNITY MEDICINE

Third B.H.M.S :

1. Man and Medicine

2. Concept of health and disease in conventional medicine and homoeopathy

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) Pasteurisation 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

Fourth B.H.M.S.

1. 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

2. 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

3. Demography and Family Planning; Population control; contraceptive practices; National Family Planning Programme.

4. Health education and health communication

5. Health care of community.

6. International Health

7. Mental Health 8. Maternal and Child Health 9. School Health Services 10. National Health Programs of India including Rashtriya Bal Chikitsa Karyakram. 11. Hospital waste management 12. Disaster management 13. Study of aphorisms of organon of medicine and other homoeopathic literatures, relevant to above topics including prophylaxis. B.

SURGERY

Second B.H.M.S

(a) General Surgery:- 1. Introduction to surgery and basic surgical principles. 2. Fluid, electrolytes and acid-base balance. 3. Haemorrhage, haemostasis 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 Defeciency

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

Third B.H.M.S

(b) 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. B. Ear C. Nose 1. Applied anatomy and applied physiology of ear 2. Examination of ear 3. Diseases of external, middle and inner ear 1. Applied anatomy and physiology of nose and paranasal sinuses. 2. Examination of nose and paranasal sinuses 3. Diseases of nose and paranasal sinuses D. 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 oesophagus.

Ophthalmology 1. Applied Anatomy, Physiology of eye 2. Examination of eye. 3. Diseases of eyelids, eyelashes and lacrimal drainage system. 4. Diseases of Eyes including injury related problems. F. Dentistry 1. Applied anatomy, physiology of teeth and gums; 2. Milestones related to teething. 3. Examination of Oral cavity. 4. Diseases of gums 5. Diseases of teeth 6. Problems of dentition General management, surgical management and homoeopathic therapeutics of the above topics will be covered.

PRACTICE OF MEDICINE

Third B.H.M.S

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 of.

Fourth B.H.M.S

1. Nutritional and metabolic diseases 2. Diseases of haemopoietic system. 3. Endocrinal diseases. 4. Infectious diseases. 5. Diseases of cardiovascular system. 6. Diseases of urogenital Tract. 7. Disease of CNS and peripheral nervous system. 8. Psychiatric disorders. 9. Diseases of locomotor system (connective tissue, bones and joints disorders) 10. Diseases of skin and sexually transmitted diseases. 11. Tropical diseases. 12. Paediatric disorders. 13. Geriatric disorders. 14. Applied anatomy

and applied physiology of different organ and systems relating to specific diseases. 15. Knowledge of clinical examination of respective systems. (a) General management and homoeopathic therapeutics for all the topics to be covered in Third B.H.M.S and Fourth B.H.M.S shall be taught simultaneously and the emphasis shall be on study of man in respect of health, disposition, diathesis, disease, taking all predisposing and precipitating factors, i.e. fundamental cause, maintaining cause and exciting cause.