PATHOLOGY SYLLABUS

(A)Pathology and microbiology shall be thought in relation to concept of miasms as evolved by Samuel Hahnemann and further developed by JT Kent, JH Allen and other stalwarts, with due reference to Koch's postulate,correlation with Immunity,susceptibility and thereby emphasizing homoeopathic concept of evolutionof disease and cure

(B)Focus will be given on the following points,

a. Pathology in relation with Homoeopathic MateriaMedica
b. Correlation of Miasms and Pathology
c. Characteristic expression of each Misam
d. Classification of symptom and Diseases according to pathology
e. Pathological finding of Disease and their findings, interpretation and usage in management of patients under Homoeopathic treatment

(C)To summarise all the topics in general and systemic pathology and microbiologyshould be correlated,at each juncture, with Homoeopathic principles so that the importance of pathology in homoeopathic systemcould be understood by students.

A. THEORY:

(A). GENERAL PATHOLOGY

01. Cell Injury and cellular adaptation
02. Inflammation and repair (Healing).
03. Immunity
04. Degeneration
05. Thrombosis and embolism
06. Oedema
07. Disorders of metabolism
08. Hyperplasia and hypertrophy
09. 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
26. Calcification
27. Effects of radiation
28. Hospital infection

(B) SYSTEMIC PATHOLOGY

01. Mal-nutrition and deficiency diseases.
02. Diseases of Cardiovascular system
03. Diseases of blood vessels and lymphatic
04. Diseases of kidney and lower urinary tract
05. Diseases of male reproductive system and prostate
06. Diseases of the female genitalia and breast.
07. Diseases of eye, ENT and neck
08. Diseases of the respiratory system.
09. 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. 3. Normal bacterial flora
4. 4.Pathogenicity of micro-organisms
5. 5. Diagnostic microbiology

II. Immunology:

01. Development of immune system

02. The innate immune system

03. Non-specific defense of the host

04. Acquired immunity

05. Cells of immune system; T cells and B cells Cell mediated immunity

06. The compliment system

07. Antigen; Antibody; Antigen - Antibody reactions (Anaphylactic and Atopic); Drug Allergies 8.Hypersensitivity

09. Immuno-deficiency

10. Auto-immunity

11. Transplantation

12. Blood group antigens

13. Clinical aspect of immuno-pathology.

III. Bacteriology:

01. Bacterial structure, growth and metabolism

02. Bacterial genetics and bacteriophage

03. Identification and cultivation of bacteria

04. Gram positive aerobic and facultative anaerobic cocci, eg.Streptococci, Pneumococci.

05. Gram positive anaerobic cocci, e.g. peptostreptococci

06. Gram negative aerobic cocci, eg. neisseria, moraxella, kingella.

07. Gram positive aerobic bacilli, eg. corynebacterium, aacillus anthrax, cereus subtitis, mycobacterit tuberculosis, M. leprae, actinomycetes; nocardia, organism of enterobacteriaceae group.

08. Gram positive anaerobic bacilli, eg. Genus clostridium, lactobacillus.

09. Gram negative anaerobic bacilli, eg. bacteroides, fragilus, fusobacterium.

10. Others like- cholerae vibrio, spirochaetes, leptospirae, mycoplasma, chlamydiae, rickettsiae, yersinia a pasturella.

IV. Fungi and Parasites:

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

2. Protozoa - (1) Intestinal (Entamoebahistolytica, Giardia lamblia, Cryptosporidumparvum), Urogenital (Trichomonasvaginalis) 3) Blood and Tissues (Plasmodium-species, Toxoplasma gondTrypanosoma species, leishmania species).

3. Helminths - (1) Cestodes (tapeworms)- Echinococcusgranulosus, Taeniasolium, Taeniasaginata(2) Trematodes (Flukes): Paragonimuswestermani, Schistosomamansoni, Schistosomahaematobium (3) Nematodes- Ancylostomaduodenale, Ascarislumbricoides, Enterobiusvermicularis,Strongyloides, Stercoralis, Trichuristrichiura, Brugiamalayi, Dracunculusmedinensis, Loa loaOnchocerca volvulus, Wuchereriabancroftii).

V. Virology:

01. Introduction

02. Nature and classification of viruses

03. Morphology and replication of viruses

04. 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, molluscumcontagiosum etc.

05. 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, chikungunya virus (i) Miscellaneous virus: (1) arena virus (ii) corona virus (iii) rota virus (iv) bacteriophages

VI. Clinical microbiology: (1) Clinically important microorganisms (2) Immuno-prophylaxis, (3) Antibiotic Sensitivity

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

VIII. Infection and Disease: (1) Pathogenicity, mechanism and control (2) Disinfection, and sterilisation (3) chemotherapy (4) Microbial pathogenicity

Histopathology:

Teaching of histopathological features with the help of slides of common pathological conditions from each Elvstern.IL. Teaching of gross pathological specimens for each system.Histopathological techniques, e.g. fixation, embedding, sectioning and staining by common dyes and stains.Frozen sections and its importance. Electron microscopy; phase contrast microscopy.

B. PRACTICAL AND CLINICAL

Clinical and Chemical Pathology: estimation of haemoglobin (by acidometer) count of Red Blood Cells and white Blood Cells, bleeding time, clotting time, blood grouping, staining of thin and thick films, differential counts. Blood examination for parasites. Erythrocyte sedimentation rate.

Urine examination, physical, chemical microscopical, quantity of albumin and sugar. Examination of Faeces: physical, chemical (occult blood) and microscopical for ova and protozoa. Methods of sterilisation, preparation of a media, use of microscope.Gram and acid fast stains.Motility preparation. Gram positive and negative cocci and bacilli. Special stains for corne-bacterium gram and acid fast stains of pus and sputum.

Preparation of common culture medias, e.g. nutrient agar, blood agar, Robertson's Cooked Meal media (RCM) Mac-Conkey's media. Widal test demonstration

Exposure to latest equipment, viz. auto-analyzer, cell counter, glucometer.

Histopathology (a) Demonstration of common slides from each system. (b) Demonstration of gross pathological specimens. (c) Practical or clinical demonstration of histopathological techniques, i.e. fixation, embedding. (d) Sectioning, staining by common dyes and stain. Frozen section and its importance. (e) Electron microscopy, phase contrast microscopy.

C. EXAMINATION:

No. of .Papers-02

PAPER - I

SECTION A - General Pathology 50 Marks

SECTION B- Systemic Pathology 50 Marks

PAPER - II

SECTION A

Bacteriology 25 Marks

Fungi and parasites 25 Marks

SECTION B

Virology 20 Marks

Clinical microbiology and diagnostic procedures 10 Marks

Microbiological control and mechanism of Pathogenicity 10 Marks

General Topics Immuno-pathology 10 Marks

Year & Subject	Written		Practical or Clinical Including Oral		Total	
II BHMS	Full Marks	Pass Marks	Full Marks	Pass Marks	Full Marks	Pass Marks
Pathology	200	100	100	50	300	150