It is with great pleasure to present before all of you the Post Graduate Syllabi in six Specialities (1. Ilmul Advia 2. Moalajat 3. Kulliyat 4. Tahaffuzi wa Samaji Tibb 5. Ilmul Qabala wa Amraze-Niswan and 6- Ilmul Jarahat) for which the well-wishers, academicians & researchers of Unani system of Medicine were looking forward.

PG courses in Unani are being conducted since long. At present eight institutes are conducting PG courses in various specialities. The need of framing the PG syllabus of Unani was felt by the Council to consolidate the syllabus of each subject in such a way that it may become more practical oriented and good specialists/clinicians may be produced.

First the syllabus of the six Specialities in which PG courses exist has been prepared by the subject experts called from all over India who after going through various workshops/meetings/interactive sessions could make the task accomplished.

The syllabus is presented in English language as the popularity of Unani System of Medicine at the International level is increasing day by day.

The work of preparing draft syllabus of remaining PG subjects in Unani System of Medicine is in the pipeline and in due course of time we will be able to formulate the syllabi of other Specialities also. The valuable suggestions from various quarters are welcome regarding the syllabus.

We thank the Dept. of Ayush, Govt. of India for moral as well as financial support to the CCIM for its smooth functioning as well as all the participants/subject experts for giving their precious time and valuable suggestions in finalising the Syllabi of the six Post Graduate Courses.

Vaidya Raghunandan Sharma
President

Prof. Hakim Syed Khaleefathullah
Vice President (Unani) & Chairman Unani Committee
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Research Methodology and Biostatistics

Research Methodology

- Types of research
  (a) Literary research
  (b) Clinical research
  (c) Experimental research
  (d) Observation and field studies

- Trends and possibilities of R&D of Unani Drugs

- Research problems
  (a) Definition
  (b) Selection and sources of research problems

- Hypothesis
  (a) Types: Null and alternate hypothesis

- Research designs
  (a) Types of Research designs

- Controls in research designs
  (a) Selection criteria
  (b) Placebo and plain control
  (c) Randomization
  (d) Balancing and matching

- Factors effecting research results.

- Tools and techniques in research
  (a) Interview, questionnaire, inventories, scales
  (b) Rating scales

- Computer programmes used in research
  (a) Minitab
  (b) SPSS

- Protocols for research and report writing
  (a) Protocols for experimental, clinical and community based research.
  (b) Writing research report.
  (c) References in research report.
     (i) Books
(ii) Journals
(iii) Compendia
(iv) Bulletins
(v) WHO Reports
(vi) Internet Sites

- **Guidelines for Research**
  
  (a) WHO
  (b) ICMR
  (c) CPCSEA

**Bio-Statistics**

- **Scope and utility of Biostatistics**

- **Descriptive Statistics**
  
  (a) Analysis of Data
    
    (i) Data collection, tabulation and presentation of data.
    (ii) Measure of central tendency – Mean, Median and Mode.
    (iii) Measures of dispersion: Range, quartile deviation, standard deviation.
  
  (b) Probability
    
    (i) Definition and laws of probability
    (ii) Types of probability distribution
    (iii) NPC and its application size
    (iv) Randomized samples
  
  (c) Sampling
    
    (i) Types and sample size
    (ii) Randomized sampling

- **Inferential Statistics**
  
  (a) Correlation and linear regression
    
    (i) Karl Pearson correlation coefficient
    (ii) Linear regression equations.
  
  (b) Test of significance
    
    (i) ‘t’ test
    (ii) ‘z’ test.
  
  (c) Test of variance
    
    (i) ANOVA one way
    (ii) ANOVA two way
    (iii) $\chi^2$
  
  (d) Non-parametric tests
    
    (i) Median test, Mann Whitney U test.
    (ii) Kruskall Wallis test, Fried test.

- **Vital Statistics**
  
  (a) Rate and Ratios
  (b) Standardization of population
    
    Risk factors
PRELIMINARY EXAMINATION

ILMUL ADVIA

PAPER – II

Qawanine Advia (Principles of Unani Pharmacology)

- Mavaleede salasa per mufassal tabsera, Neez Mabadiyate Advia ki ahmiyat aur zaroorat.
- Dawa, Ghiza, Zulkhassa, Dawae Mutlaq, Ghizae Mutlaq, Dawae Ghizaie aur Ghizae Dawaie per tafseeli maloomat.
- Mizaje Advia, Darjate Advia aur inke taayyun ka tahqeeqi jaiza.
- Ghair maroof Advia ki makhsoos intiyyazi khususiyat.
- Ghair maroof Advia ki maloomat ke zaraye, neez ghair maroof Advia ke tajarbat per tafseeli maloomat.
- Mukhtalif nizamhaaye jismani per Advia ke asrat.
- Tibbe Unani mein muravvaj Ashkaale Advia per jadeed nuqtae nazar se tabsera.
- Tibbe Unani mein Abdale Advia ki ahmiyat, zaroorat aur muravvaj Abdale Advia ka tahqeeqi jaiza.
- Advia mufrada ki muddate hayat, unke usool aur tahaffuz ke bare mein tafseeli maloomat.
- Masalike Advia aur zaroori tajdeed.
- Advia ki muzir kaifiyat aur Islah ka tahqeeqi jaiza.
- Tibbi Akhlaqiyaat wa hidayat barai Tahqeeqat

PAPER – III

Ilmul wasful Aqaqeer (Pharmacognosy)

- Introduction to pharmacognosy and its scope
- Pharmacognostical methods used to establish the identity and purity of herbal drugs
- Plant Nomenclature.
- Classification of Plant Kingdom.
- Cultivation of medicinal plants, Good agricultural and collection practices, Introduction to plant tissue culture
- Characteristic features of certain medicinally useful families
  (a) Solanaecae (Datura stramonium, Solanum nigrum.)
  (b) Apocynaceae (Rauwolfia serpentina, Wrightia tinctoria)
  (c) Papaveraceae (Papaver somniferum)
  (d) Liliaceae (Colchicum luteum, Aloe vera.)
  (e) Leguminosae (Trigonella foenum, Acacia arabica)
  (f) Umbellifercaea (Coriandrum sativum, Ferula asafoetida)
  (g) Malveceae (Hibiscus rosa sinensis, Althaea officinalis)
  (h) Euphorbiaceae (Ricinus communis.)
(i) Compositae  (Artemisia absinthium, Chicorium intybus)
(j) Asclepiadaceae (Calotropis procera)

- Drying and storage of drugs.
- Deterioration of stored drugs.
- Identification of crude drugs
  (a) Morphological Studies
  (b) Anatomical Studies
    (i) Microtomy
    (ii) Powder study
    (iii) Quantitative Microscopy
       (a) Stomatal no, Stomatal index, Pallisade ratio, Vein islet no.

**Alkaloids and alkaloid containing drugs**
(a) Kuchla
(b) Suranjan
(c) Opium
(d) Ephedra
(e) Datura
(f) Qinnab
(g) Asrol

**Glycosides and glycoside containing drugs**
(a) Revand
(b) Senna
(c) Sibr
(d) Aslussoos
(e) Digitalis
(f) Ushba

**Volatile oil containing drugs**
(a) Badyan
(b) Rehan
(c) Zeera
(d) Darchini
(e) AnisoonAniseed
(f) Ustokhuddus
(g) Jaiphal

**Flavonoid containing drugs**
(a) Aftimoon
(b) Mako
(c) Kasni
(d) Kabab chini

**Fixed oil containing drugs**
(b) Badam
(c) Zatoon
(d) Kunjad
(e) Baidinjeer
(f) Katan
(g) Chalmogra
- **Tannin containing drugs**
  (a) Amla
  (b) Mazoo
  (c) Kakrasinghi
  (d) Main khurd
- **Drugs of animal origin**
  (a) Sadaf
  (b) Marwareed
  (c) Marjan
  (d) Saresham Mahi
  (e) Jund bedastar

**Practicals**
- Organoleptic identification of ten medicinal plants
- Powder identification of Sena, Aslossos, Kishnez, Revand
- Morphological identification of five families
- Anatomical characteristics and dissection of root and stem of two medicinal plants
- Floral formula and floral diagram of five medicinal plants
- Determination of Alkaloids, Phenols, steroids, terpentenes, glycoside, saponins, proteins, tannins, reducing sugar, non reducing sugar, Xanthoproteins, resins, vitamins, crude fibres, phosphate, iron, sulphur, calcium, aluminium, nitrogen.
- Tests for microbial contamination.

**PAPER - IV**

**General, Systemic and Experimental Pharmacology**

**General Pharmacology**
- **Introduction**
  (a) Pharmacognosy
  (b) Pharmacy
  (c) Pharmacokinetics
  (d) Pharmacodynamics
  (e) Therapeutics
  (f) Toxicology
  (g) Clinical pharmacology
  (h) Pharmaceutics
  (i) Clinical pharmacology
- **Routes of Administration**
- **Pharmacokinetics**
  (a) Absorption of drugs
  (b) Distribution of drugs
  (c) Metabolism of drugs
(d) Excretion of drugs
(e) Bioavailability and half life of drugs
(f) Dose response curve, $LD_{50}$, $ED_{50}$

- **Pharmacodynamics**
  (a) Receptor theory of drug action
  (b) Receptor Families
  (c) Receptor – ligand Binding
  (d) Factors modifying drug response

- **Pharmaco-vigilance**
  Drug interactions
  Adverse Drug Reaction
  Reporting and monitoring of ADR

- **Principles of Toxicology**

**Systemic Pharmacology**

**Autonomic Nervous System**
A Review of ANS and neurohumoral transmission
Sympathomimetic Drugs
Sympatholytic Drugs
Parasympathomimetic Drugs
Parasympatholytic Drugs
Anticholinesterase Drugs

**Central Nervous System**
Sedative and Hypnotics
Opioids
Anticonvulsants
Antipsychotics

**Cardiovascular System**
Antihypertensive Drugs
Drugs used in Heart Failure
Anti anginal Drugs

**Miscellaneous**
Diuretics
NSAID
Drugs used in Peptic ulcer
Antidiabetic Drugs
Corticosteroids

**Experimental Pharmacology**
Common laboratory animals, characteristics and experimental uses
Factors affecting drug response
Drug administration (Oral and IV) and withdraw of blood samples
Dose conversion factors
Vehicles for animal administration
Isolated tissue preparation
Methods of rendering the animals unconscious
Anaesthetics used in lab animals
Basic equipment
Physiological salt solutions
Standard drugs and chemicals

**Bioassay**
- (a) Scope
- (b) Principles
- (c) Designing
- (d) Types

**Drugs Screening**
- (a) Simple
- (b) Programmed
- (c) Blind Screening

**Neuro-pharmacological Studies**
- (a) Irwin’s profile
- (b) Smith’s profile

**Toxicity Studies**
- (a) Acute
- (b) Sub acute
- (c) Chronic studies

Anticonvulsant activity
Analgesic, Antipyretic, Anti-inflammatory and Anti-ulcer activities
Action on cardiovascular system
Hepatoprotective, Nephroprotective Activities
Hypoglycemic and Hypolipidemic Activities

**PRACTICALS**

**In-vivo Experiments**
- To study the general pharmacology and gross behaviour in mice and rats.
- To study the effects of pentobarbital Induced hypnosis in mice.
- To study the effects of chlorpromazine on the locomotor activity using photoactometer in rats.
- To study the analgesic activity of morphine using tail flick method by analgesiometer in mice.
- To study the analgesic activity of morphine using hot plate method in mice.
- To study the analgesic activity of asprin using acetic acid induced writhing test in rats.
- To study the anti-inflammatory activity of aspirn / indomethacin against carrageeneen induced paw edema in mice.
- To study the anticonvulsant activity of phenytoin using convulsiometer in rats.
- To study the antisecretory and ulcer protective effect of H$_2$ -Blockers in rats.

**In-vitro Experiments (on isolated preparations)**
- To record a concentration response curve (CRC) of acetylcholine using ileum preparation in rats.
- To record the effect of physostigmine (Eserine) on the CRC of acetylcholine using ileum preparation in rats.
- To record the blocking effect of atropine sulphate on the CRC of acetylcholine using ileum preparation in rats.
ILMUL ADVIA

PAPER – I

Advia Mufrada

Shinakhat, Khawas wa Taseerate Advia
Description of Unani single drugs with Scientific names, Mutaradifat aur unki Mahiyat, Mizaj, Afaal wa Khawas, Murakkabat, Istemal, Affale Khusooosi, Muzir, Musleh, Badal, Miqdar, Khurak wa Kimiavi Ajza used in following systems

i. Advia mutalliqa Nizame Asab wa Dimagh.
ii. Advia mutalliqa Nizame Tanaffus.
iii. Advia mutalliqa Qalb wa Daurane Khoon.
iv. Advia mutalliqa Nizame Baul.
v. Advia mutalliqa Nizame Tayleed wa Tanasul.
vi. Advia mutalliqa Jild wa Jarahat.
vi. Advia mutalliqa Ain, Uzn, Anaf wa Halaq.
ix. Advia mutalliqa Amraze Aamma,
ix. Advia Mutafarriqa.
x. Ghair Maroof/ Matrook Unani Advia
xi. Bisehri, Chiksini, Sahdevi, Habbul-Quilquil, Huma, Khilla, Azriyun etc

Practicals
Identification of the common Advia Mufrada, their Morphology, Histology, Constituents, Standardization and Quality Control Measures.
Preparation of herbarium.

PAPER – II

Advia Murakkaba Wa Dawasazi (Unani Compound Drugs and Pharmacy)

1. Qawanine Tarkeebe Dawa
2. Importance of compounding of drugs.
3. Importance & Critical assessment of renowned Qarabadeen.
5. Murakkabat ke mizaj ka taayyun
6. Standardization of Compound formulations and their quality control measures.
7. Murakkabat mukhtalif badni nizam se mutalliq: -
   • Amraze Raas
   • Amraze Sadar
   • Amraze Qalb
   • Amraze Meda wa Amaa
   • Amraze Kabid, Mirarah wa Tihal
   • Amraze Kulya wa Masana
   • Amraze Makhsoosa – Mardana, Zanana wa Atfal
Dawasazi
1. Unani Dawasazi, historical background and significance in the present context.
2. Istelahate Dawasazi aur unki Efadiyat.
   Taqtee, Daq wa Raz, Burd, Sahaq, Zikhl, Tasweed, Tarweeq, Tasfiya, Tarsheeh,
   Taqteer, Igtha, Izalae laun, Tajfeef, Tabkheer, Tas’eed, Tarseeb, Asar, Tahleel,
   Azabat, Tabakh, Naqah, Tajeeb, Iqla, Tabloor, Tajsheer, Ihraq wa Taklis, Tahmeez,
   Taqliya, Tashwiya, Gasal, Tadheen, Takhmeer wa Taaffun, Itfa.
3. Aamale Dawasazi, application and significance.
4. Tadbeere Advia and its scientific validation
5. Ilmlut Taklees, scope and scientific validation.
6. Methods of preparation and uses of various kushtajat
7. Kushton ki Meyar Bandi
8. Aamale Dawasazi aur uska scientific Jaiza.
9. Control of Microbial contamination and preservation of compound medicines
   Sterile Processing, Contamination Control
    Ma’uluban, Maush shaeer and its types, Ma’ul asl, Ma’ul’lahem.
12. Drug and Cosmetics Act

Practical
1. Practical concerned with Tadbeere Advia, Kushtasazi and preparation of various
   Arqiyat, Raoghaniyat, Sat, Khar.
2. Practical concerned with identification of Qiwami Murakkabat and different
   compound formulations.
3. Preparation of different compound formulations and their standardization.

PAPER – III

Standardisation of Unani Drugs

- Aims and Objectives of Standardisation
- Standardisation of Herbal, Mineral, and Animal origin drugs
- Physical Standardisation
  (a) Moisture content
  (b) Viscosity
  (c) Melting point
  (d) Solubility
  (e) Optical rotation
  (f) Refractive index
  (g) Ash values
(h) Extractive values
(i) pH value

• **Chemical standardisation**
  (a) Quantitative Chemical Tests.
    (i) Acid value
    (ii) Ester value
    (iii) Peroxide value
    (iv) Iodine value
    (v) Hydroxyl value
    (vi) Saponification value
  (b) Qualitative Chemical Tests for:
    (i) Alkaloids
    (ii) Carbohydrates
    (iii) Glycosides Saponins Phenols Resins
    (iv) Esters
    (v) Alcohol
    (vi) Acids
    (vii) Volatile oil
    (viii) Fats
    (ix) Fixed oils

• **Analytical methods in drug analysis**
  (a) Sublimation
  (b) Distillation
  (c) Methods of separation and isolation
  (d) Chromatography
    (i) Types, aims and objectives.
    (ii) Thin layer chromatography
    (iii) Paper Chromatography
    (iv) Column Chromatography.
    (v) Liquid Chromatography.
    (vi) Gas Chromatography.
  (e) HPLC, HPTLC, Mass Spectroscopy,
  (f) General description of electrophoresis
  (g) Spectroscopy: UV and flame photometry, Atomic Absorption Spectroscopy

• **Quality control of single drugs of Unani Medicine**
  (a) Adulteration of drugs
  (b) Aflatoxin contamination
  (c) Factors affecting quality of drugs
  (d) Aflotoxins
  (e) Heavy Metals
  (f) GMP, GLP, SOP

• **Standardisation of compound formulations**
  (Arq, Majoon, Safoof, Qurs and other dosage forms)
(a) Process standardisation.
(b) Product standardisation.
(c) Stability studies and Shelf life

**PRACTICALS**

- Practical demonstration of
  
  (a) Total ash value
  (b) Acid soluble, acid insoluble ash.
  (c) Water soluble, water insoluble ash.
  (d) Sulphated ash values.
  (c) Determination of moisture content.
  (d) Determination of extractive values.
  (e) Determination of Acid values, iodine value, peroxide value, saponin value, ester value hydroxyl value.
  (f) Determination of refractive index.
  (g) Determination of Rf value by TLC.

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**PRELIMINARY EXAMINATION**

**MOALAJAT**

**PAPER II**

**Clinical Biochemistry and Genetics**

**Part – A**

**Clinical Biochemistry**
- Basic chemistry of carbohydrates, lipids, amino acids and proteins.
- Enzymes: General characteristics of enzymes & assay methods kinetics assay of some clinically important enzymes.
- Vitamins and minerals.
- Metabolism of carbohydrate lipids and amino acids
- Classification of body fluids and their biochemical co-relation (General considerations)
- Practical (Lab Course)
- LFT, KFT, Sugar profile, Lipid profile.
- Enzyme assays

**Part – B**

**Genetics**
- DNA as Genetic Material: Structure of DNA, Structure of RNA
- DNA Replication, Transcription, Translation
- Mutations: (Basic)
- Chromosomal Abrasions
- Genetic disorders
- Autosomal and sex chromosomal abnormalities
- In-born errors of Carbohydrate, protein and lipid Metabolism (General considerations)
- DNA based diagnosis
- DNA based diagnostic probes
- Population based DNA testing
- Mutation detection
- Gene therapy

**PAPER – III**

**Usoole Tashkhees wa Tajveez**
(Principles of Diagnosis and Treatment)

- Tashkhees ki gharz-o-ghaiyat
- Aam Istefsaraat
- Rudade Mareez (The History Taking)
  (a) Student’s Approach to the Patient
  (b) History Taking
(c) General Principles of Examination
(d) The Case History Recording
(e) Case Presentation
(f) Interpretation of clinical Data

- **Ummoo imtehane marceez** (General Examination of Patient)
  (a) General appearance
  (b) Mental and Emotional states
  (c) Physical Attitude, gait, physique
  (d) Face, eyes, neck, thyroid gland
  (e) lymphatic system
  (f) Pulse
  (g) Respiration
  (h) Temperature
  (i) Blood Pressure
  (j) Routine Examination
  (k) Assessment of functional Impairment

- **External Manifestations of Disease**
  a) Inspection of Exterior of the body
  b) Abnormalities in Head and Neck
  c) Examination of Mouth, Eye and Ear
  d) Skin, nails and hair and Special Techniques of the examination
  e) Upper limb, lower limb
  f) Genitalia.

- **Intehan Nizame Hazm** (Examination of Digestive System)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
  (e) Usoole Ilaj

- **Intehan Nizame Tanaffus** (Examination of Respiratory System)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
  (e) Usoole Ilaj

- **Intehan nizame Qalb wa Daurane Khoon** (Examination of Cardiovascular system)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
  (e) Usoole Ilaj

- **Intehan nizame Baul wa Tanasul** (Examination of Urino-Genital system)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
- **Imtehan nizame Asaab** (Examination of The Nervous System)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
  (e) Usoole Ilaj

- **Imtehan nizame Ezam wa Mafasil** (Examination of Skeletal System)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
  (e) Usoole Ilaj

- **Imtehane Nafsani** (The Psychiatric Assessment)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
  (e) Usoole Ilaj

- **Imtehan Ghudade laqanati** (Endocrine System)
  (a) Clinical Symptoms
  (b) Examination
  (c) Investigations
  (d) Recent diagnostic techniques
  (e) Usoole Ilaj

- **Imtehan Mashaikh** (Geriatrics)
  (a) Clinical Symptoms
  (b) History Taking
  (c) Examination
  (d) Investigations
  (e) Recent diagnostic techniques
  (f) Usoole Ilaj

- **Examination of Haemopoietic system**
- **Examination of children**
- **Examination of unconscious patient**
- **Ethical Issues in Medicine**
- **Nabz**
  (a) Sharaite Nabz, Tareeqae Imtehan
  (b) Ajnase Nabz
  (c) Nabze Mufrad, Nabze Murakkab
  (d) Asbaabe Nabz
  (e) Nabz ke Tabai Iktelafaat
  (f) Nabz ke Marzi Iktelafaat

- **Imtihan Baul - Nazri**
- **Imtihan Baraaz - Nazri**
• Usoole Ilaj
  (a) Ilaj ke kulli tareeqe
  (b) Ilaj bil’dawa ke Qavaneen.
  (c) Auram ka usoole Ilaj
  (d) Tareeqae taadil wa tanqiyah akhlat
  (e) Qavaneen wa zaraye Istefragh- Ishal, Qai, Idrar, Huqna, Tareeq, Tanfees, Hijamat, Taleeq, Fasd
  (f) Tashkhees na hone ke surat me ilaj

• Nuskha naveesi

PRACTICAL
• The students of Moalajat part 1st will be posted at the IPD unit for imparting practical training.
• Case presentation is compulsory for every student
• 3 months posting in I.C.C.U.-
For utilization of modern equipments like respirator, monitor, syringe pump, central lines (C.V.P.) in I.C.U, C.C.U & Neuro I.C.U & all modern equipments used in clinical emergencies.

PAPER IV
Ilaj Bil Tadbeer (Regimenal Therapy)

• Introduction, Principles and Scope
• Concept, objectives and classification
• Tadabeer related with Hawa and atmosphere
• Tadabeer related with Diet (Ilaj bil Giza)
• Tadabeer related with Ilaj Nafsani & Roohani
• Geriatric care
• Dal’k (Massage)
  (a) Definition, Principles, Objectives
  (b) Classification of Dal’k
  (c) Description of muscles related to Dal’k
  (d) Properties and action of oils used in Dal’k
  (e) Effects of adjuvant drugs in Dal’k
  (f) Indications and therapeutic uses
  (g) Adverse effects
• Riyazat (Exercise)
  (a) Definition, Principles, Objectives
  (b) Classification of Riyazat
  (c) Scientific interpretation and effects of Riyazat in certain disease like Sports induced disease
  (d) Therapeutic importance and indications
  (e) Adverse effects
Hammam (Bathing)
(a) Definition, Principles, Objectives
(b) Types of Hammam
(c) Kinds of Hammam rooms and its importance
(d) Therapeutic uses and indications
(e) Adverse effects

Hajamat (Cupping)
(a) Definition
(b) Types
(c) Sites and procedures of Hajamat
(d) Indications and contraindications

Fasd (Venesection)
(a) Definition
(b) Sites of Venesection
(c) Anatomy and Description of Vessels of Venesection
(d) Instruments used in Venesection
(e) Pre Venesection Procedure
(f) Investigations like Hb%, Bleeding Time, Clotting Time, Prothrombin time, platelet count, blood sugar, Blood group with Rh typing
(g) Procedure and precautions
(h) Indications and Contraindications
(i) Management of Post procedural problems.

Irsale Alaq (Leeching)
(a) Definition
(b) Description of Leech and its various types
(c) Leech collection, storage and preservation
(d) Leeching procedure
(e) Precautions
(f) Indications and contraindications

Ishal (Purgation)
(a) Definitions, Principles
(b) Indications and contraindications
(c) Drugs used for purgation

Qai (Emesis)
(a) Definition, aims and objectives
(b) Drugs used for Qai
(c) Indications and contraindications

Idrar (Diuresis)
(a) Definitions, aims and objectives
(b) Indications and contraindications
(c) Drugs used for Idrar

Amle Kai (Cauterisation)
(a) Definition, Aims, Objectives
(b) Procedure
(c) Precautions
(d) Indications and contraindications
• **Nutool (Douching / Irrigation)**
  (a) Definition, aims and objectives
  (b) Indications and contraindications

• **Huqna (Enema)**
  (a) Definition, principles, aims
  (b) Objectives
  (c) Procedure
  (d) Drugs used in huqna
  (e) Indications and contraindications

• **Tareeq (Diaphoresis)**
  (a) Definition, aims and objectives
  (b) Methods and Procedures
  (c) Indications and contraindications

• **Inkebaab (Vaporisation)**
  (a) Definition, aims and objectives
  (b) Methods and Procedures
  (c) Indications and contra indications

• **Definitions aims, objectives, procedures indications and contraindications of the following regimens**
  (a) Takmeed, Tikor, Pashoya,
  (b) Ialam,
  (c) Nushuq, Tadheen, Tazahha, Saoot
  (d) Lakhlaka, Tanfees, Sukooob
  (e) Imala

**PRACTICAL**

The students of Moalajat part 1st will be posted at the ilaj bil’tadbeer unit for imparting practical training in various regimens.
Amraze Nizame Aasab, Amraze Nafsania wa Ghudade Laqanati
(Diseases of Nervous System, Psychiatric diseases and Endocrine Systems)

Amraze Nizame Asbi
Suda wa aqsaam, Sarsam wa aqsaam, Warme dimaghi nukhai, Warme Aghshiyae dimagh, Duar, Qoma, Sara, Tashannuj, Rasha wa aqsaam (Daur raqs aur Parkinsonism), Sakta, Khuraje Dimagh, Falij, Laqwa, Istarkha, Huzale Zohri, Waja ul Asab, Dimagi Sudde, Jiryane Khoon Dimaghi, Alzheimers disease.

Amraze Nafsaniya
Sahar, Nisyaan, Malankholiya, Mania, Kaboos, Izterabe Nafsani, Izmehlaal, Ikhtinaqur raham, Psychosis, Neurosis, Ikhtilaj, Akhoni (Waham), Shahwate Kalbia, Jooal Baqar.

Ghudade Laqanati
Ghuddae laqanati aur unki ifrazat ka tasawwur atibba ki nazar mein (umoomi jayaeza)

Ghuddae Nukhamiya
Ghuddae Nukhamia ke ifrazat ki qillat wa ifrat se hone wale Amraz e.g., Kibrul Izm, Qazamah (Dwarfism), Ziabetus sada, Salate nukhamiya.

Ghuddae Darqiya
Ghuddae Darqiya ke ifrazat ki qillat wa ifrat se hone wale Amraz e.g., Farte Darqiya (Hyperthyroidism), Tasammume Darqiya, Qusoore Darqiyaq, Ghoter (Goiter) Cretinism, Ozema Mashati, Salate Darqiya.

Ghuddae Janibud Daraiqa
Ghuddae Janibud darqiya ke ifrazat ki qillat wa ifrat se hone wale Amraz e.g., Farte duraiqiya (Hyper parathyriodism), Qusoore Duraqiya (Hypo parathyroidism).

Banqaras
Banqaras ke hissae Laqanati ke ifrazat ki qillat wa ifrat se hone wale Amraz e.g., Ziabetus Sukkari (Diabetes mellitus), Qillate Sukkaridum (Hypoglycaemia), Salae Jazeerom (Insulinoma)

Ghuddae Fauqul Kulya
Ghuddae Fauqul kulya ke ifrazat ki qillat wa ifrat se hone wale Amraz e.g., Mutalazema Koshing, Aldosteroma, warmul qawatim (Phoechromocytoma), Addison’s disease, Naqse aldosteromia (Hypo aldosteronism).

Metabolic Disorders
Diabetes mellitus, lipid metabolic disorders, osteoporosis

Amraze Tavarus
Sibghi Jasdi Amraz (Autosomal disorder), Sinfvabasta Amraz (Sex linked diseases).

Amraze Khushiya
Ifrazat ka mukhtasar jayeza, Khusiya aur amraze bah ka bahmi taalluq, Jinsi Amraz e.g., Jinsi mubtasar (sexual paucity), Aajil buloogh (Delayed or Incomplete puberty), Mutlazima Klinefelter (Klinefelter syndrome), Acquired testicular defects, Infertility, Salate Khushiya, Tasaddiur Rajal (Gynaecomastia).
Amraze Khusiyatur Raham
Balooghe mutbasar (Isosexual precocious puberty), Turner syndrome, Uqr, Salate Khusiyat ur raham.

PAPER – II

Amraze Nizame Tanaffus wa Daurane Khoon, Tauleede Dam, Ghudade Lymphaviah
(Diseases of Respiratory, Circulatory, Haemopoetic Systems, Lymph nodes and disease due to atmospheric pollution)

Amraze Nizame Tanaffus

Amraze Qalb wa Daaraane Khoon
Sue mizaje qalb, Zoafe qalb, Khaqfaan, Warm Ghilaafe qalb, Warm Azlate qalb, Warm Batanae qalb, Warm Batanae qalb hudaari, zubhai sadria , Ghashi, Izamul qalb, Iflaasul qalb, Maitatul qalb, Suqoote qalb imtelai, Corpalmonale, Zaghtuddum qavi. Saqoot Daaraane Khoon satahi, Tasallube sharayeen, Anurisma, Manuatul qalb, Cardiac arrhythmia, Khilqi amraze qalb, Butue qalb, Cardiac arrest, Cardiac failure, Sadma Heart block, pericardial diffusion

Amraze Samamate Qalb
Tazaiuqur raseen (mitral stenosis), qusoorur raseen (mitral incompetence), tazaiuqe aurata (aortic stenosis), qusooore aurata (aortic incompetence).

Amraze Sharayeen wa aurida (Diseases of vessels)
Atherosclerosis, Aneurism, thrombophlebitis, Burger’s disease, Raynaud’s disease and other vascular diseases.

Taftishaat
Amraze Qalb wa Dauran khoon ke jaanch ke mukhtalif qadeem wa jadeequn ke bare mein malumat. (e.g. ECG, Echocardiography, Cardiac imaging, Catheterization etc.)

Amraze Dam
Faqruddam, Abyazuddam, Thalasaemia, Fasade Khoon, Nazafuddam Mizaji, Amraze Injimaduddam.thrombocytopenia

Immunological Disorders
Haemopoitic system
Lymph nodes and disease due to atmospheric pollution

PAPER – III

Amaraze Nizame Hazm, Baul wa Tanasul wa Istahala
(Diseases of Digestive & Uro-genital systems and Metabolism)

Approach towards a patient with Gastrointestinal Disease
Amraz Fam (Diseases of Mouth)
Amraz Mari (Diseases of Oesophagus)
Amraz Maedah (Diseases of Stomach):
  • Zofe medah
- Sue mizaje medah
- Warme medah
- Qarho-e-medah-o-asna-e-ashari (Peptic Ulcer Disease)
- Kasrat-o-qillat-e-hamoozat-e-maedi
- Sartaan-e-medah (Carcinoma of Stomach).
- Tukhma
- Sue-e-hazm

**Amraz Amaa (Diseases of Intestines):**
- Zarb-o-khilfa (Malabsorption Syndrome).
- Disorders of Absorption
- Ishaal (Diarrhoea).
- Zalaqul-ama.
- Qoolanj-e-ama (Intestinal colic).
- Baraz-ud-dam (Melena).
- Warm-e-qaulon (Inflammatory Bowel Disease).
- Warm-e-qaulon qarhi.(Ulcerative colitis)
- Diqq-e-ama (Intestinal Tuberculosis).
- Iltehaab-e-miqad (Proctitis ).
- Acute Appendicitis and Peritonitis
- Irritable Bowel Syndrome,
- Intestinal Obstruction
- Common Diseases of Colon and Anorectum

**Diseases of Liver and Biliary Tract:**
- Zofe kabid.
- Su-e-mizaj-e-kabid.
- Warm-e-kabid (Hepatitis).
- Dubelatul kabid (Liver abscess).
- Yerqaan. (Hyperbilirubinemia)
- Alcoholic liver Disease
- Talaiuf-e-kabid (Cirrhosis of liver)
- Hepatic Failure
- Carcinoma of liver.
- Istasqa (Ascitis).
- Izm ul kabid (Hepatomegaly).
- Hisatul mirara (Cholyolithiasis)
- Warm e mirara (Cholecystitis).
- Other Biliary Diseases

**Amraz Tihal (Diseases of Pancreas):**
- Warm-e-banqaraas (Pancreatitis).

**All modern diagnostic procedures related to Digestive system.**

**Amraz-e-Nizam-e-Baule-o-Tanassul wa Istahala** (diseases of urinary and reproductive system and metabolism)
Diseases of Urinary System:

Diseases of Kidney:
- Su-e-mizaj-e-kuliya.
- Zofe kuliya.
- Warm-e-kuliya (Glomerulonephritis).
- Mutafarrigue Amraz-e-kuliya.
- Diq ul kuliya (Renal Tuberculosis).
- Saqoot ul kuliya (Renal parenchymal Disease, Acute and Chronic Renal Failure).
- Nephrotic Syndrome
- Warm-e-Hauz ul kuliya (Pyelo-nephritis).
- Hisatul kuliya (Renal calculi).
- Hydronephrosis.
- Incontinence of urine.
- Baulud dam (Haematuria).
- Renal lesions in diabetes.
- Urinary Tract Diseases

All modern diagnostic procedures related to Uro-genital system

Diseases of Reproductive System:
- Zofe baah.
- Surrat-e-inzal.
- Kasrat-e-Ehtalaam
- Aur mutalique amraz.
- Salpingitis
- Oophoritis
- Per vaginal Bleeding Disorders (Menorrhagia, Metrorrhagia etc.)
- Proctitis
- Sterility

Diseases of Metabolism:  Common metabolic disorders and diseases

PAPER IV

Amraze Mutaddiyah, Hummiyat, Jild wa Mafasil
(Infectious diseases, Fevers and Diseases of Skin & Joints and Autoimmune disorders)

Amraze Mutaddiyah (Infectious diseases)
- Mana’at and Tadiya
- Importance of Mana’at in the treatment of infectious diseases
- Classification of Infectious Diseases
- Micro-organism and host interaction
- Nosocomial Infections
- Bacterial Diseases
- Viral Diseases
- Fungal Diseases
- Protozoal Diseases
- Helminthic Diseases
- HIV and associated disorders
Hummiyat (Fevers)
- Tareef-e-Humma
- Ufoonat
- Aam Usoole Ilaj

Amraaze-Jild (Skin Diseases)
- Applied anatomy of Skin
- Functions and classification of skin
- Examination of Skin and an approach to diagnosing skin diseases
- Principles of therapy
- Disorders of pigmentation
- Disorders of nails
- Diseases of Hair
- Different Skin Diseases
- Skin Infections and Infestations
- Skin in systemic diseases
- Management of skin diseases cosmetology

Amraz-e-Mafasil (Rheumatology)
- Clinical examination of musculoskeletal system
- Applied anatomy, physiology and Investigations
- Major manifestations of musculoskeletal diseases

Niqris (Gout)
Wajaul Mafasil (Arthralgia)
Warm-e-Mafsïl (Arthritis)
Tahajjur Mufasil (Fixation of Joint)
Irqun-Nisa (Sciatica)
Wajawul Zahar (Backache)
Wajawul Khasra (Low Backache)
Wajawul Qutn (Lumbago)
Osteoporosis
Ankylosing spondylosis

- Principles of Management of musculoskeletal disorders
Hayati Keemiya (Biochemistry)

Carbohydrates
a. Definition and brief concept of topic
b. Fundamental concept of glycolysis, difference between glucokinase and Hexokinase, Feeder pathways, citric acid cycle, electron transport chain, oxidative phosphorylation (Mitchell’s hypothesis, ATP Synthase)
c. Shuttle systems (Malate aspartate and glycerol phosphate shuttle)
d. Lactose intolerance, galactosemia.

Proteins
a. Definition and brief concept of the topic
c. Primary, secondary, tertiary and quaternary structure of proteins.
d. Function and Biological importance of proteins.
e. Metabolism (Transamination, Deamination and urea cycle)

Lipids
a. Definition and brief concept of topic.
b. Physical properties, Saponification, iodine number, acid number
c. Triacylglycerols (TGs), waxes, Phospholipids, sphingolipids, steroids, Lipoproteins
d. Monolayer, Bilayer and Miscelles formation
e. β-oxidation of fatty acids (Saturated, unsaturated and odd numbered fatty acids
f. Ketone bodies

Nucleic Acids
a. Definition and brief concept of the topic (Nucleosides, nucleotides)
b. Chemistry of DNA and RNA, Biological importance
c. Chargaff’s rule, Watson and Crick model of DNA, Messelson and Stahl’s experiment, Tm of DNA,
d. DNA/RNA as molecule of heredity
e. Replication of DNA (origin of replication, okazaki fragments, properties of DNA Polymerases, klenow fragment
f. Transcription (Promoter sequences, RNA polymerases, Rho- dependent and independent termination.
g. Metabolism (salvage pathway, Lesch Nyhan Syndrome)
h. One gene one poly peptide concept
i. Polymerase chain reaction
Enzymes
   a. Definition and brief concept of the topic
   b. Properties of enzymes
   c. Factors influencing enzyme action
   d. Michaelis Menten equation, Vmax
   e. Enzyme inhibition, brief concept
   f. Clinically significant enzymes (SGOT, SGPT, LDH, CPK, α-Amylase)

Oxygen Transporting Proteins
   a. Differences between Hemoglobin & Myoglobin
   b. BOHR effect
   c. Types of Hemoglobin
   d. Hemoglobinopathies
   e. Hemoglobin a better transporter of O₂
   f. Effort of 2,3 Biophosphoglycerate

Oxygenderived Free Radicals
   a. Brief concept about free radical generation
   b. Types of radicals
   c. Affiliation with diseases
   d. Role of ROS in antimicrobial and cytotoxic activity.

Metabolism
   a. Basic Concepts and design (Anabolism & Catabolism) distribution of
      nutrients in live amino acids, fatty acids) carbohydrates
   b. ATP, NADH and FADH₂ as energy sources.

Itlaqi Afal-Ul-Aza (Applied Physiology)
   1. Internal Environment:
      Cell membere Transport, Body fluids, Fluid balance, Haemostasis,
      Coagulation of blood, concept of Unani Medicine regarding blood
      coagulation.
   2. Applied physiology of various systems of Human Body:
      Cardiovascular System, Respiratory System, Digestive System, Metabolism,
      Uro-genital System, Nervous System, Endocrinology, Reticuloendothilal
      System.
   3. Nutrition and Diet

Practical
   1. Laboratory Tests for elements.
   2. Laboratory analysis of body fluids with reference to its contents.
   3. BMR in different age groups.
   5. Basic concepts of colorimetry, Beer Lambert’s Law, λ max
PAPER-III

Kulliyate Umoore Tabiya-I
(Arkan, Mizaj, Akhlat wa Aaza)

1. Askari, Anasir, Listuqussat ka Ijamati Bayan, Ansir ke Bare men Atibba ka ikhtilaf, Anasire arba ke baseet aur murakkab hone ka sainey mutakah, Anasire badane insani ka qadeem wa jaddeed naqriyah.


PAPER-IV

Kulliyate Umoore Tabiya - II
(Arwah, Quwa wa Afa’al)


3. Afa’al ki Tareef aqsaam aur inki misalein.

Practical

1. Maamali Imtehanat ke zariyah se Arkan ki mawjudi ka mutalah, Sodium, potassium, Calcium, iron aur arkan ki mawjudi.
2. Mizaj ka sciency vujud BMR ke zariyah.
3. Akhlat se mutaalliq, Rang ke aitbar se, Qiwam ke iitebar se, Albumin, Globulin, hormones, shakar, namakiyat, jaseemat ka maloom karna, (Maamali intihanat ke zariyah).
4. Aza ke mutaalliq (slides) histology ke zariyah mushahida.
5. Rooh, Quwa, Afaal ka ECG, Pulse oxymeter
PAPER -I

Kulliyate Usule Ilaj, Asbab Wa Alamat

3. Amraz ki jins, Sabab, Marz, Arz.
5. Awqat-e-Amraz aur inka sciency taqabuli jayza, Amraz se mutaaAlliq khusoosi Tazkirah (Marz ka nam aur uski munasibat).
6. Asbab-e-Kulli(Umooi Tazkira), Sitta Zarooriya, Ghair Zarooriya ki Sciency ifadiyat.

Practical

Mazkura Umoor ke mushahidat wa Tajribat.

PAPER-II

Kulliyate Nabz wa Baul o Baraz

1. Nabz, baul wa baraz ka Taqabuli Mutalah
2. Nabz ki tareef, ajnas wa aqsam, Mukhtalif afrad ki nabz (Mard, aurat, hamila, ghair hamila, bachch, hawan, bordha) Amraz ki Tashkhees, nabz ke zariyah

Practical
1. Nabz-e-Tabayi wag hair tabayi ka qadeemaur jaded Tareeqe ke matabiq mushahida.
3. La-Shu’ai ke zariyah Tashkees
4. ECG ka mutalah
PAPER III
Itlaqi Kulliyat

1. Kulliyat ka mafhum aur uska itlaqi mutalah
2. Qawaneen-e-Ilaj, Aam Tazkirah wa Tafseer
3. Zarayah-e-Ilaj, Nazariyat wa Falsafa
4. Ilaj Bil Tadbeer, Tareef wa tafseel maā
   Itlaqui Mutalah, Tadbeer Tareequi: Qai, ishal, idrar, tareeq
5. Ilaj Bil ghiza: Tareef wa tafseel maā itlaqi mutalah Ahkam-e-ghaza wa paani, Ghiza ke kaifiyat, Nauyiyat wa Awqat, Taghzia wa Naqs-e-Taghzia.
6. Ilaj Biddawa: Tareef wa Taqseem maā italaqi mutalah,
   Dawa ki aqsam: Taskheen, Tabreed, Tarteeb, Tajfeef-e-Badan

Practical
Mazkura bala umoor ka matab mein mushahida.
Concept of Disease
- Definitions of Disease
- Classification of Disease
- Causation
  (i) Temperamental
  (ii) Structural
  (iii) Epidemiological Triad
  (iv) Web of Causation
- Concepts of Prevention and Control as adopted in changing Environment
- Natural History of Disease

Introduction to the epidemiology
- Definition
- Historical aspect
- Hippocrates as father of epidemiology
- Objectives
- Approach

Mizaj and its alternatives:
- Mizaj and health
- Preventive approaches
- Alternatives
- Methods of moderation in modulators
- Impact of alternative on health

Dynamics of disease transmission
- Mode of transmission
- Explanation of related terms
- Disease spectrum

Measurement of disease and health
- Prevalence
- Incidence
- Death rates, surveillance

Screening
- Why, in whom and how
- Validity and specificity of screening tests
- Predictive value
- Reliability
- Variations

Natural history of the disease
- Prognostic methods

Randomized trials and their uses
- Method and types of randomization
- Selection
- Study designs
- Sample size
- Reporting of result
- Ethical consideration
  **Identification of cause**
  - Case control and cohort studies
  - Cross sectional studies
  - Selection of case and cohort
  - Matching
  - Bias and its types
  **Establishment of association**
  - Types of risk and their measurement
  - Odds ratio
  - Preventive value test
  **Inference from epidemiological studies**
  - Causation
  - Ecological study
  - Types of associations
  - Types of causal association
  - Criteria for causal relationship
  - Confounding, interaction
  **Application of epidemiological approach in Unani medicine context**
  - Context of Arkan
  - Mizaj
  - Akhlat
  - Ghiza
  - Epidemiological research module
  **Evaluative value of epidemiology**
  - Application of epidemiological approach to evaluate health services
  - Preventive services
  - Validity of screening test

**PAPER III**

**Asbabe Sitta Zaroriya**

**Concept of Health**
(a) Definitions of Health as described by Unani physicians, Modern Scientist and W.H.O.
(b) Determinants of Health
   (i) Structural
   (ii) Temperamental
   (iii) Air
   (iv) Water
   (v) Diet
   (vi) Occupation
   (vii) Inhabitant
   (viii) Personal Habits and habitat (life styles and behavioural disorder)
   (ix) Age & Sex
(c) Dissolution of Rutoobate Ghareezia and factor responsible for
(d) Indicators and Dimension of Health
(e) Spectrum of Health and Disease
(f) Right to Health

**Asbabe Sitta Zaroriya**
- Tareekhi Pasmanzar, Taa’ruf, Ta’reef wa Ahmiyat
- Mashmoolat
(a) Hawae Muheet (Ambient Air):
Ta’reef, Zaroorat, Zarae’y, Hawae Jayyadul Jauhar, Fasade Hawa (Taghayyurat wa Aaloodgi) – Asrat, Awariz wa Amraz, Tahaffuz (Taqaddum Bilhifz) wa Tadabeer (Hifz ma Taqaddum)

(b) Makoolat Wa Mashroobat (Foods and Drinks):
Ghiza: Ta’reef, Darjabandi, Zaroorat, Zarae’y, Mutawazin Ghiza, Ahkamate Ghiza, Naqse Ghiza (Taghziyah), Farte Ghiza (Taghziyah) wa Fasade Ghiza – Asrat, Awariz wa Amraz, Tahaffuz (Taqaddum Bilhifz) wa Tadabeer (Hifz ma Taqaddum)
Pani: Ta’reef, Darjabandi, Zaroorat, Zarae’y, Mae Jayyadul Jauhar, Fasade Aab (Aaloodgi), Asrat, Awariz wa Amraz, Tahaffuz (Taqaddum Bilhifz) wa Tadabeer (Hifz ma Taqaddum)

(c) Harkat Wa Sukoon Badni (Bodily Movements and Repose):
Ta’reef, Zaroorat, Taqseem, A’am Maqasid, Tabai wa Ghair Tabai – Asrat, Tadabeer

(d) Harkat Wa Sukoon Nafsani (Psychic Movements and Repose):
Ta’reef, Zaroorat, Tabai wa Ghair Tabai – Asrat, Tadabeer, Rooh ki Harkat ka Itlaqi Mutalea

(e) Naum Wa Yaqza (Sleep and Wakefulness):
Ta’reef, Zaroorat, Tabai wa Ghair Tabai – Asrat, Tadabeer, Harkate Rooh aur Hararate Ghareeziyah, Harkat wa Yaqza Aur Sukoon wa Naum mein Mumasilat

(f) Ehtabaas Wa Istafragh (Retention and Evacuation):
Ta’reef, Ahmiyat, Zaroorat, Tabai wa Ghair Tabai – Asrat, Tadabeer

- Asbabe Sitta Zarooriya aur Mizaj
- Asbabe Sitta Zarooriya aur Akhlat

PAPER IV
Environmental Health and Sanitation

Definition, Types

Physical Environment
- Water, Air, Soil, Housing, Wastes, Radiation, Noise, Light
  - Water
    1. Characteristics
    2. Requirements
    3. Uses
    4. Sources
      a. Rain
      b. Surface Water
        i. Reservoirs
        ii. Rivers & Streams
        iii. Tanks, Ponds & Lakes
      c. Ground Water
i. Wells
   • Deep Wells
   • Shallow Wells
   • Tube Wells

ii. Springs

5. Water Pollution
6. Purification of Water
   a. Large Scale
      i. Storage
      ii. Filtration
         • Slow Sand Filtration
         • Rapid Sand Filtration
      iii. Disinfection
   b. Small Scale
      i. Household purification of Water
      ii. Disinfection of Wells
   c. New Techniques

7. Water Quality
   a. Acceptability Aspects
   b. Microbiological Aspects
   c. Chemical Aspects
   d. Radiological Aspects

8. Surveillance of Drinking Water Quality
9. Water Conservation
   • Air
      1. Composition
      2. Requirements
      3. Air Pollution
         a. Sources
         b. Meteorological Factors
         c. Air Pollutant
         d. Prevention and Control of Air Pollution
         e. Disinfection of Air
      4. Ventilation
      5. Disaster
         a. Definition
         b. Hazards
         c. Management

• Soil

• Housing
   a. Social Goal of Housing
   b. Standards
   c. Rural Housing
   d. Housing and Health
   e. Overcrowding
   f. Indicators of Housing
   g. Public policy

• Wastes
   a. Definition
   b. Sources
c. Types

d. Latrine
  - Types

e. Health Hazards

f. Treatment & Disposal Technologies
g. Excreta Disposal

- Radiation

- Noise

- Light

Biologic Environment

- Medical Entomology
  1. Mosquito
  2. Housefly
  3. Sand fly
  4. Lice
  5. Fleas
  6. Rodents
  7. Insecticides

Social Environment

- Occupation
  a. Occupational Environment
  b. Hazards
  c. Diseases
  d. Prevention, Control & Measures
    - Medical Measures
    - Engineering Measures
    - Legislation

- Nutrition
  a. Definition
  b. Classification of Foods
  c. Nutrients
    i. Macronutrients
      - Proteins
      - Carbohydrates
      - Fats
    ii. Micronutrients
      - Vitamins
      - Minerals
  d. Balanced Diet
  e. Principal Foods
  f. Nutritional Requirements
  g. Energy
  h. Nutritional Problem in Public Health
    i. Low Birth Weight
    ii. Protein Energy Malnutrition (PEM)
    iii. Xerophthalmia
iv. Nutritional Anaemia
v. Iodine Deficiency Disorder (IDD)
vi. Endemic Fluorosis

i. Life style diseases
   a. Cardiovascular Diseases
   b. Diabetes
   c. Obesity
   d. Cancer
   e. Hypertension

j. Assessment of Nutritional Status
   Assessment Methods
      a. Clinical Examination
      b. Anthropometry
      c. Laboratory & Biochemical Assessment
      d. Functional Indicators
      e. Assessment of Dietary Intake
      f. Vital Statistics
      g. Assessment of Ecological Factors

k. Nutritional Surveillance

l. Social Aspects of Nutrition

m. Food Hygiene

n. Food Borne Diseases

o. Food Toxicants

q. Community Nutrition Programmes
Epidemiology of infectious disease
- Explanation of related terms
- Concept of putrefaction and its impact on *rutubate badania*
- Causes of putrefaction
- Waba and its causes
- Disinfection
- Isolation
- Prevention

Air borne diseases
- Viral
  - Humiyat
  - Measles
  - ARI
  - Rubella
  - Influenza and variants
  - Diphtheria
  - Pertussis
  - Meningitis
  - Tuberculosis

- Bacterial
  - Humiyat
  - Measles
  - ARI
  - Rubella
  - Influenza and variants
  - Diphtheria
  - Pertussis
  - Meningitis
  - Tuberculosis

Water borne diseases
- Typhoid
- Acute diarrheal disease
- Cholera
- Hepatitis A,E
- Poliomyelitis
- Dracunculiasis
- Amoebiasis
- Giardiasis

Soil borne diseases
- Ascariasis
- Ancylostomiasis
- Tetanus

Vector borne diseases
- Malaria
- Filarial
- Plague
- Leishmaniasis
- Arboviral diseases
- Rickettsial diseases

STI, HIV
- Surface infection
  - Rabies
  - Leprosy
PAPER II

Tadabeer Hifze Sehat

Ta’arruf Tadabeer hifze sehat
Riyazat:
  • Ta’reef, Aghraz Maqasid, Aqsam, Fawaid, Sharait, Condition Specific Riyazat
Aa’ya:
  • Ta’reef, Aqsam, Tadabeer
Dalak:
  • Ta’reef, Aqsam, Physiological effects, Uses (Indications), Contraindications,
    Practical aspect of Dalak, Sequence of Dalak, Oils for dalak, Duration of dalak,
    Condition specific dalak
Hammam:
  • Definition, Structure, Fawaid, Sharait, Contraindications, Condition specific
    hammam
Tareeq:
  • Definition, Methods, indications, Aghraz wa maqasid
Ishal:
  • Introduction, Mushil ke liye Ayyam wa awqat, Tadabeer daurane mushil, Ishal for
    prevention of disease and promotion of health, Mushil ke bad aab wa ghiza,
    Tabreed
Qai:
  • Introduction, need, awqat, Qai ke bad munasib Tadabeer, Qai ke aaraz aur unka
    ilaj, Kasrate qai ke nuqsanat
Fasd:
  • Ta’reef, Waqt, Aadar, Ahkam, Mashhoor vareeden, Complications
Hijamat:
  • Introduction, time, Sites, Indications, Mode of action
Taleeq:
  • Classification of leech, Medicinal efficacy of biochemical present in leech saliva,
    indications, Method, application and removal of leech, after treatment
Idrar:
  • Definition, types, indications of each type
Tanweem:
  • Importance of sleep, duration of sleep, Effects of excess of sleep, Tadabeer baraie
    Naum
Tarammul:
  • Introduction, indications, effects
Tazaha:
  • Introduction, indications, effects
Tadheen:
  • Introduction, indications, Use of Oils, effects
Tadabeer hifze sehat balihaaz umer:
  • tadbeer moulood, Tadabeer atfal, Tadabeer saba, Tadabeer mashaikh, Naujawano
    ki Tadabeer
Tadabeer hifze sehat aur mukhtalif mausamiyat:
  • Mausam Rabi: Tarruf, Asrat, tahaffuzi Tadabeer
  • Mausam Saif: Tarruf, Asrat, tahaffuzi Tadabeer
  • Mausam Shita: Tarruf, Asrat, tahaffuzi Tadabeer
  • Mausam Khareef: Tarruf, Asrat, tahaffuzi Tadabeer

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PAPER III

Health Care System

Sehati Taleem ke aghraz, maqasid, tareeqa, mawad, usool.
Sehati Nigahdasht ke Nizam – Mukhtalif Darjat
Khandani Bahbood (Family Welfare)
Tareef wa Maqasid
Buniyaadi Insani Huquq
Khandani Mansoobabandi ki Ahmiyat (Sehati wa samaji)
Mardum Shumari
New Revised Population Policy
Maney Hamal ke nazariyat aur Tadabber
Evaluation of Maney hamal tadabber
Qaumi Khandani Mansoobabandi Programme
Hukumat ki Taraf se kiye janewale Iqdamaat
Sehat se mutaalliq Qawaneen
Sehati Khidmaat
Peshawarana Amraz
Sehati Mansoobabandi aur Intezam

Qaumi Sehati (National Health) Programmes
Qaumi Sehati (National Health) Policies
Sehati Tanzeemat (Health Organization)
(a) Objectives and their Functions
(b) International Health organizations:
   (i) WHO, UNICEF, UNESCO, UNDP, FAO, ILO, USAID, World Bank,
       International Red Cross, FORD Foundation, Rockefeller Foundation,
       CARE
(c) Health organizations in India:
   (i) Health Organizations – Central Level
   (ii) Health Organizations – State Level
   (iii) NGOs.

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PART- A Biochemistry

Theory: Introduction to Biochemistry:
Basic concept of cell structure and functions.
Chemical composition of human body and major bio-molecules.
Scope and importance of biochemistry and major bio-molecules.
Scope and importance of biochemistry in medicine and research.

Carbohydrates
Structure, function and relation
Biochemical importance and classification (with structure).
Digestion, absorption and metabolism
Homeostasis of blood sugar
Applied biochemistry.
Diabetes mellitus.
Glycosuria.
Inborn error of metabolism.

Lipids
Structure function relation.
Biological membrane.
Biochemical importance and classification (with structure).
Digestion, absorption and metabolism.
Importance and classification of lipoprotein.
Cholesterol metabolism.
Hypercholesterolemia.
Hyper triglyceridemia
Ketosis
Inborn error of metabolism.

Proteins
a. Structure function relation
b. Biochemical importance and classification (with structure)
c. Digestion, absorption and metabolism.
d. Classification of peptides and amino acids.
e. Biochemical importance and metabolism of essential amino acids.
g. Methods of hormone assay.
h. Biochemical importance, nomenclature and classification of enzymes.
i. Applied biochemistry.
Clinical enzymology.
Inborn error of metabolism.
Signal transduction
Hemoglobin and porphyrias.

Nucleic Acids
DNA structure RNA structure
Structure function relation
Chemistry and biological importance.
Protein synthesis.
Biosynthesis and catabolism of purines and pyrimidines.
Applied biochemistry.
• Recombinant DNA technology.
• Hyperuricaemia
• Inborn error of metabolism.

Water and Minerals
a. Body fluid in unani medicine and classification and biochemical correlation general consideration
b. Distribution of fluid in body
c. Water homeostasis
d. Biochemistry of major, minor trace elements (Fe, ca, P, mg, mn, zn, cu, i, F, se, and Mo).
e. Applied biochemistry – electrolyte disturbances (Na and K)

Vitamins
Classification and chemistry (with structure).
Applied biochemistry.
ENZYMES: general characteristic and clinically important enzymes.
Deficiencies
Hypervitaminosis.

Immuochemistry
a. Component of immune system.
b. T and B lymphocytes
c. applied immunology – AIDS, Rheumatoid Arthritis

Biochemistry of Hormone.
Practical:
1. Functions of various organs and their biochemistry assessments.
2. Specimen preparation analysis – blood, urine and CSF.
3. Significance of various tests of carbohydrates, proteins and lipids.
4. Principles of analytical techniques- analytical chemistry, photometry, chromatography and immunoassay.
5. Biochemical tests of blood;
   • Quantitative estimation of glucose, urea, creatinine, cholesterol, triglycerides, uric acid, proteins, Phosphate, triaminase.
6. Biochemical tests of urine:
   • Tests of normal constituents
Organic: urea, uric acid and creatinine
Inorganic: bicarbonates, chloride, phosphate, ammonia and sulphate
7. Tests of abnormal constituents
- Proteins, glucose, ketones, bile salts, and bile pigments and blood
- Quantitative estimation of glucose, calcium, diastase and creatinine.

PART – B  Genetics
1. Medical genetics – definition, scope and branches.
2. Mendelian inheritance:
   - History of genetics
   - Mendel’s experiments
   - Terminology and definitions
   - Law of segregation
   - Law of independent assortment
3. Extension to mendelian segregation patterns:
4. Modification of mendelian ratios
5. Multiple allelism – eg: ABO blood group inheritance in man
6. Blood group incompatibility eg: Rh – factor
7. Cell division and chromosomal segregation:
8. Cell cycle
9. Mitosis
10. Meiosis
11. Genetics of sex determination and differentiation:
12. Mechanism of sex determination
13. Sex linked inheritance eg: colour blindness, haemophilia, DMD, etc
14. Sex chromatin and x- inactivation
15. Cytogenesis:
16. Chromosome morphology
17. Chromosome variations – structural aberrations, numerical aberrations
18. Components of chromatin histones and non histones
19. DNA packaging
20. Biochemical genetics:
   - Inborn errors of metabolism
   - Disorder’s of amino acids, Carbohydrates, lipids and mucopolysachharides.
21. Molecular genetics:
   - DNA and RNA as nucleic acids
   - Structure of DNA-primary, secondary and tertiary
   - Watson and Crick model
   - Forms of DNA
   - Structure of RNA
   - Types of RNA, m- RNA, t-RNA, r-RNA.
   - DNA replication
   - Central dogma of molecular biology
   - Genetic code
• Protein biosynthesis-transcription and translation
22. Genetics of cancer:-
  • Classification and function of oncogenes
  • Relation of oncogene’s to chromosomal defects
  • Apoptosis
23. Principles of genetics by Klug
24. Principles of genetics by Gardner

PAPER III
Itlaqi Tashreeh wa Munafe ul Aza
(Applied Anatomy and Physiology of female reproductive system)

I. Applied Anatomy
  • Female urogenital system- normal and applied aspects.
  • Abdomen, pelvis, pelvic floor, anterior abdominal wall, upper thigh (inguinal ligament, inguinal canal, rectum, and anal canal).
  • External and internal genitalia applied aspects, developmental defects.

II. Physiology of ovaries, uterus, and fallopian tubes.
III. Gametogenesis, fertilization, implantation and early development of embryo.
IV. Physiology of menstruation, puberty, adolescence and menopause.
V. Endocrinology related to female reproductive system.
VI. Anatomical and Physiological changes during pregnancy and parturition
VII. Post natal physiological changes.
VIII. Mammary glands
  • Structure
  • Control of breast development
  • Physiology of Lactation
  • Milk and its composition

IX. Humoral and cellular immunology in AMRAZ E NISWAN
X. Immunology of pregnancy.
XII. Fetal growth and development, fetal physiology and circulation.
FINAL YEAR EXAMINATION (3rd Year)

PAPER – I

QABALAT WA AMRAZE NAUMAULOOD
(Obstetrics and Neonatology)

- The full range of obstetrics, including high-risk obstetrics
- Genetics, including the performance and assistance of prenatal diagnostic and therapeutic procedures and patient counseling
- Learning operative vagina deliveries, including obstetric forceps or vacuum extractor.
- Performing vaginal breech deliveries
- Performing vaginal births after previous cesarean delivery
- The residents must learn the principles of general and spinal anesthesia, together with management and the complications of these techniques.
- Experience in the management of critically ill patients
- Immediate care of the newborn, every resident must have experience in resuscitation of the human newborn, including Tracheal intubation, the principles of general neonatal complications must be learned a well.
- Puerperium and postnatal care and complication.
- The full range of commonly employed obstetrical diagnostic procedures including imaging techniques especially ultrasonography.
- Social obstetrics and vital statistics.

Fetus and Newborn
- Initiation of air breathing-stimuli to breath air
- Management of delivery-immediate care, newborn resuscitation
- Methods to evaluate new born condition-APGAR score, umbilical cord, blood acid base studies
- Preventive care-eye infection prophylaxis B immunization, vit-K, universal newborn screening
- Routine newborn care-estimation of gestational age, skin care, umbilical cord, feeding icterus neonatorum, circumcision, rooming-in, hospital discharge
- Neonatal hyper bilirubinaemia and management.
- Neonatal sepsis – prevention, detection and investigations.
- Management of common neonatal problems.

Diseases of Fetus and New Born

A. Diseases of the preterm fetus and new born
- Respiratory distress syndrome
- Retinopathy of prematurity
- Intraventricular hemorrhage
- Necrotizing enterocolitis
- Brain disorders-neonatal encephalopathy, cerebral palsy
- Infant outcome in extreme premature birth
- Anemia
- Isoimmuniozation
- Hyperbilirubinaemia
- Non immune hydrops fetalis
Fetal cardiac arrhythmia

**B. Diseases of the term fetus and neonates**
- Respiratory distress syndrome
- Meconium aspiration syndrome
- Hemorrhagic diseases of the new born
- Thrombocythemia-hyperviscosity
- Polycythemia-hyperviscosity

**C. Fetal death**
- Definition of fetal mortality
- Causes of fetal death
- Evaluation of the still born infant
- Pregnancy after previous still birth

**D. Injuries of the fetus and newborn**
- Spontaneous intracranial hemorrhage
- Intraventricular hemorrhage from mechanical injury
- Cephalohematoma
- Nerve injuries
- Skeletal and muscle injury and congenital injury

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**PAPER – II**

**AMRAZE NISWAN**

(Gynaecology)

- The full range of the content of gynecology, humoral and temperamental etiological theories and unani treatment.
- Diagnosis and treatment of stress incontinence and urethral syndrome.
- Oncology including radiation and chemotherapy.
- Diagnosis, surgical and non-surgical management of breast disease, including fine needle aspirations and mammogram.
- Infertility.
- Psychosomatic and psychosexual counseling.
- Experience in the management of critically ill patients.
- Clinical examination.
- Contraception (male and female).
- Medical termination of pregnancy.
- Safe abortion – selection of cases.
- Techniques and management of complication of Medical Termination of Pregnancy
- National health programmes example-.RCHC.
I. General Considerations, Maternal Evaluation and Medications

II. Critical Care and Trauma
- Obstetrical intensive care
- Acute pulmonary edema (heart failure, acute RDS)
- Sepsis syndrome
- Trauma of pregnancy
- Cardiopulmonary resuscitation

III. Obesity
- Definition
- Associated morbidity and mortality
- Treatment of obesity
- Pregnancy and obesity

IV. Cardiovascular Diseases
- Diagnosis of heart diseases
- General management
- Surgical corrected heart disease
- Valvular heart diseases
- Congenital heart diseases
- Other cardiovascular conditions

V. Chronic Hypertension
- Definitions
- Diagnosis and treatment
- Preconception and early pregnancy evaluation
- Effects of chronic hypertension on pregnancy
- Management during pregnancy

VI. Pulmonary Disorder
- Pneumonia
- Asthma
- Tuberculosis

VII. Renal and Urinary Tract Disorders
- Urinary tract changes during pregnancy
- Assessment of renal disease during pregnancy
- Urinary tract infection
- Nephrolithiasis
- Glomerulopathies
- Polycystic kidney diseases
- Chronic renal diseases
- Pregnancy after renal transplantation
- Dialysis during pregnancy
- Acute renal failure

VIII. Gastrointestinal Disorders
• Diagnosis techniques
• Nutritional support
• Disorders of the upper gastrointestinal tract
  i. Hyperemesis gravidarum
  ii. Reflex esophagitis
  iii. Hiatal hernia
  iv. Diaphragmatic hernia
  v. Achalasia
  vi. Peptic ulcer
  vii. Upper gastrointestinal bleeding
• Disorders of the Small Bowel Colon
  i. Inflammatory bowel diseases
  ii. Intestinal obstruction
  iii. Appendicitis

IX. Hepatic, Biliary Tract and Pancreatic Disorders
A. Diseases of the liver
  i. Intrahepatic cholestasis
  ii. Acute fatty liver
  iii. Acute viral hepatitis
  iv. Cirrhosis
  v. Portal hypertention
  vi. Liver transplantation
  vii. Chronic hepatitis

B. Diseases of the gallbladder and pancreas
  i. Cholilitiasis
  ii. Cholicystitis
  iii. Pancreatitis
  iv. Pancreatic transplantation

X. Hematological Disorders
• Anaemia
• Hemoglobinopathies
• Platelet disorders
• Inherited coagulation defects

XI. Diabetes
• Classification
• Gestational diabetes
• Pregestational diabetes

XII. Thyroid and Other Endocrinal Disorders
A. Thyroid Diseases
  i. Autoimmune thyroid disease
  ii. Hyperthyroidism
  iii. Subclinical hyperthyroidism
  iv. Postpartum thyroiditis
  v. Hypothyriditis
  vi. Subclinical hypothyroidism

B. Parathyroid Diseases
Hyper and hypoparathyroidism

C. Adrenal Gland Disorders
   i. Pheochromocytoma
   ii. Cushing’s syndrome
   iii. Adrenal insufficiency

D. Pituitary Diseases
   i. Prolactinoma
   ii. Acromegaly
   iii. Diabetes insipidus
   iv. Sheehan’s syndrome

XIII. Connective Tissue Disorders
A. Immune mediated connective tissue diseases
   i. Systemic lupus erythematosus
   ii. Rheumatoid arthritis
B. Inherited connective tissue diseases
   i. Marfan’s syndrome
   ii. Ehler’s donlas syndrome

XIV. Neurological and Psychiatric Disorders

XV. Dermatological Disorders

A. Physiological changes in pregnancy (hyperpigmentation, nevi, vascular change)
B. Dermatosis of pregnancy-pruritis gravidarum, utricarial papules
C. Preexisting skin diseases

XVI. Uterine Tumours and Adnexae Complicating Pregnancy

XVII. Infections

A. Viral infections (varicella zoster, influenza, mumps, rubeola, enterovirus, rubella, CMV)
B. Bacterial infections-streptococcus, salmonella, shigella, tuberculosis
C. Protozoal infections-toxoplasmosis, malaria, amoebiasis
D. Mycotic infections
E. Emerging infections-severe acute respiratory syndrome
F. Travel in pregnancy
G. Bioterrorism-small pox, anthrax

XVIII. Sexually Transmitted Diseases

A. Syphilis
B. Gonorrhea
C. Chlamydial infections
D. Lymphogranuloma venerum
E. Herpes simplex infection
F. HIV
G. Human pappilloma virus infection
H. Chancroid
I. Trichomniniasis
J. Bacterial vaginosis
K. Other STD’S

XIX. Surgical Emergencies and Acute Abdomen during Pregnancy

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Theory Part A: Basic principles of diagnosis and management
1. History taking
2. Clinical Physical Examination of patient in General Surgery.
3. Examination of
   a. Swelling/Tumour (Awram)
   b. Ulcer/wounds – (Qarah & Zakhm)
   c. Lymphnodes – (Ghudoode lymphawia)
   d. Peripheral Arteries (Mukhtalif Nabz)
4. Preoperative assessment
5. Postoperative management

Diagnostic Techniques
1. Radiography/contrast Imaging
2. Ultrasonography
3. Magnetic Resonance Imaging
4. Computerized Tomography
5. Radio nucleotide Scanning

Part B: Unani Drugs used in Surgical Practice.
Drugs-
1. Mane Jaraseem Advia (Antibiotics)
2. Mane Afoonat advia (Antiseptics)
3. Mane Waja/ Dafe Alam (Analgesics)
4. Mane Muhallil (Anti Inflammatory)
5. Habissuddam (Haemostasis)
6. Qabiz Advia (Astringent)

Practical & Viva-Voce –
 a) Demonstration of Physical Signs in Clinical Cases.
 b) Involvement in different Diagnostic Procedures.
 c) Case presentation & Seminars
PAPER III
Takhdeere Umoomi wa Muqami
(General & Local Anaesthesia)

Part A: Takhdeer-e-Umoomi & drugs used
Theory -
1. History of Anaesthesia
2. Definition and Scope of Anaesthesia
3. Pre-A Anaesthetic Assessment
4. Pre-Anaesthetic Medication (Unani & Modern)
5. Anaesthetic agents
   a. Inhalational Anaesthetic Agents
   b. Intravenous Anaesthetic Agents.
   c. Local Anaesthetic Drugs
   d. Mukhaddir Adviat (Unani)
6. Stages of General Anaesthesia and their signs
8. Respiratory Function Tests
9. Anaesthetic Breathing System
10. Endotracheal Anaesthesia
11. Muscle Relaxants
12. Blood gases analysis-Oxygen and Carbon Dioxide
13. A brief idea of Artificial Ventilation
14. Anaesthetic Equipments

Part B: Takhdeere muqami & Nuqai & Drugs used
1. Spinal Anaesthesia/Analgesia
2. Epidural Anaesthesia/Analgesia
3. Brachial Plexus Block
4. Other Local Blocks
5. Methods of Post-Operative Pain Relief
6. Methods of Relief of Labour Pain
7. Environmental hazards in Operation Room-Fires,
8. Intensive Therapy-
9. Shock – Classification with special reference to hypovolumic Shock
10. Immediate Management of Trauma
11. Cardiopulmonary Resuscitation
12. Resuscitation of the New born
13. Blood Transfusion
14. Post anaesthesia complications & their management
15. ASA Grading

Practical & Viva Voce –
i. Cardiopulmonary Resuscitation
ii. Blood Transfusion
iii. Knowledge of Anaesthetic Equipments
iv. Knowledge of Anaesthesia Procedure
FINAL YEAR EXAMINATION- (3rd Year)

PAPER I
Jarahate Umoomi
(General surgery)

Part A: Jarahate Umoomi (General surgery)
1. Jiryanuddam wa Sadma (Haemorrhage & Shock.)
2. Tadiya makhsoosa (Specific Infections):
   (a) Kazaz (Tetanus)
   (b) Ghanqarana (Gangrene)
   (c) Atashak (Syphilis)
   (d) Juzam (Leprosy)
   (e) Diq (Tuberculosis)
   (f) Suzak (Gonorrhea)
   (g) AIDS
4. Qarah (Ulcer), Sinus, nasoor (Fistula), Iltihab-e-khulvi (Cellulitis),
5. Harq (Burns)
6. Amraz-e-Sadeen wa Sartan (Breast Diseases including carcinoma of Breast)
7. Amraz-e-Ghudood-e- Lymphawiya wa urooq (Diseases of Lymphatis, Arteries & Vein)

Part B: Amraze-Ezam-o-mafasil including Physiotherapy
(Old & recent concepts in orthopedic surgery)
1. Development of bone and congenital anomalies
3. Arthritis – Osteoartheritis - Rheumatoid Arthritis - Gout
4. Infections
   - Osteomyelitis
   - Tuberculous Arthritis
   - Spine
5. Tumours of Bone
6. Sciatic syndrome
7. Diseases of Spine, injury including Spondylitis/ Spondilisthesis
8. Frozen Shoulder
9. Diseases of tendons & Ligaments
10. Trauma Management

Practical & viva voce
a. Case history and presentation of clinical cases
b. Ilaj bil yad
   1. Amal-e- kai
   2. Takmid
   3. Amal-e-Fasd
4. Hijamat
5. Irsal-e-Alaq (Leech therapy)
6. Huqna
7. Reduction & Immobilisation including Plaster Application
8. Instruments used indifferent common Operation.
10. Dalak & Riyazat
11. Hammam
12. Rehabilitation

PAPER-II

Jarahate Nizami
(Systemic Surgery)

Part A– Jarahate Khusoosi (Systemic Surgery)
1. Amraz-e-Raas wa unuq (Diseases of Head and Neck)
   a. Development of Face
   b. Cleftlip and plate
   c. Dermoid Cysts
   d. Minigocele
   e. Hydroceplphalous
   f. Head Injury
   g. Oral Ulcers and Cancer
   h. Diseases of Parotids
   i. Thyroid, parathyroid, thyroglossal cyst and other swelling of Neck.
   j. Diseases of Salivary Glands
   (a) Miree (Oesophagus):
       (i) Atresia and Structure
       (ii) Foreign bodies
       (iii) Cancer
       (iv) GERD
       (v) Reflux Oesophagitis
   (b) Meda wa asna ashri (Stomach and Duodenum):
       (i) APD
       (ii) Peptic Ulcer and Complications
       (iii) Carcinoma of Stomach
       (iv) Hitatus Hernia
       (v) Gastric outlet obstruction
   (c) Jigar wa Mirara (Liver and Gall Bladder):
       (i) Liver Abscess
       (ii) Hydatid Disease
       (iii) Malignancy & Surgical Jaundice
       (iv) Cholecystitis and Gall Stones
   (d) Banqras (Pancreas):
       (i) Acute Pancreatitis
       (ii) Chronic Pancreatitis
       (iii) Carcinoma of pancreas
   (e) Tihal (Spleen)
(i) Injury
(ii) Portal Hyper tension
(f) Nizam-e-Hazm (GIT)
(g) Intestines and colon injuries
   (i) Peritonitis
   (ii) Obstruction
   (iii) Koch’s Abdomen
   (iv) Carcinoma Small intestine & colon
   (v) GIT bleeding
      a) Haematemesis
      b) Malaena
      c) Per rectal bleeding
(h) Zaida Awar (Appendix):
(i) Appendicitis in detail
(j) Meqad (Rectum & Anal canal):
   (i) Haemorrhoid
   (ii) Rectal Prolapse & Fistula in ano
   (iii) Perianal Abscess/ Ischiorectal abscess
   (iv) Bleeding /P/R
   (v) Fissure in Ano.
   (vi) Carcinoma of rectum
(k) Fataq (Hernia):
   (i) Definition and Classification
   (ii) Inguinal & Fermoral
   (iii) Umblical and paraumblical and incisional, epigastric.

3. Amraz-e-Nizam-e-Kulliya aur taulid wa tanasuliya (Disease of Genitourinary System)
(a) Disease of Kidney and Ureter:
   (i) Congenital Disease
   (ii) Injuries
   (iv) Nephritis - Classification, Complications & its management
   (iii) Calculi
   (iv) Infections
   (v) Tumours
   (vi) Hydronephrosis
(b) Urinary Bladder:
   (i) Stones
   (ii) Tumours
   (iii) Injuries.
(c) Prostate
   (i) BPH
   (ii) Carcinoma of Prostate
   (iii) Prostatitis
(d) Urethra
   Congenital Diseases
   50
a. Hypospedias
b. Epispedias
(i) urethritis
(ii) Gonorrhoea
(iii) Stricture
(iv) Injuries.
5. Penis:
   (i) Ulcers
   (ii) Tumours
   (iii) Phimosis
   (iv) Paraphimosis
   (a) Hydrocele, Haematocele & pyocele
   (b) Congenital Diseases- Incomplete descend of testis, Ectopic testis
   (c) Tumours
   (d) Epididimo-orchitis
   (e) Orchitis
   (f) Torsion of Testis
   (g) Varicocele

Practical & Viva Voce –
1. Surgical Instruments & Equipments
2. Common Surgical Operation
3. Common Surgical Procedures
   i. Catheterization
   ii. Proctoscopy
   iii. Esophagoscopy
4. Physical Sign of Clinical Cases / Seminars.

Part B: Jarahiyat ki Jadeed Tahqiqat (Recent Advances in Surgery)
1. New Publications in Books and Journals.
3. Laparoscopic Procedures
4. Endoscopic Procedures
5. Laser and its application in Surgery
6. Nanosurgery

Practical & Viva Voce –
Surgical Instruments & Equipments
Common Surgical Operation
Common Surgical Procedures
   (i) Catheterization
(ii) Proctoscopy
(iii) Esophagoscopy
(iv) Upper G.I. Endoscopy.

Physical Sign of Clinical Cases / Seminars.
Thesis Work.
Paper Presentation for Journals.

Paper – III

Amalyate Jarahiyat (Operative Surgery)

Part A:
a. Amalyate Jarahiyat Saghira (Minor operative procedures)
1. Circumcision under Local Anesthesia
2. Drainage of Abscesses
3. FNAC
4. Major dressings
5. Minor Anorectal Procedures (Haemorrhoids - Banding, Cryosurgery, suturing etc.)
6. Anal dilatation and Fissures, Fistulectomy
7. Minor Biopsies - Lymph node, ulcer, swellings etc.,
8. Reduction and plaster application of simple fractures and dislocations
9. Removal of simple subcutaneous swellings
10. Sigmoidoscopy and Upper O.J. endoscopy
11. Suturing Techniques
12. Vasectomy
13. Wound debridement

b. Amalyate Jarahiyat kabira (Major operative procedures)
1. Appendicectomy
2. Cholecystectomy
3. Closure of Colostomy
4. Closure of peptic ulcer / under-running bleeding ulcer / vagotomy drainage
5. Colostomy
6. Cysts and sinuses of the neck
7. Diagnostic laparoscopy
8. Drainage of breast abscess / Excision of breast lump
9. Groin Hernia repair
10. Gynaecomastia
11. Haemorrhoidectomy / Fissurectomy / simple fistulectomy
12. Hemicolecetomy
13. Herniotomy / Orchidopexy in children
14. Laparotomy for abdominal trauma / splenectomy
15. Laparotomy for intestinal obstruction / bowel resections / bowel anastamosis
16. Management of complex wounds
17. Mastectomy
18. Opening and closing the abdomen
19. Opening and closing the chest
20. Parotidectomy
21. Release of bands and simple adhesive obstruction
22. Thyroid lobectomy
23. UGI endoscopy / Flexible sigmoidoscopy
24. Ventilation
25. Wide excision of breast tumours / mastectomy / microdochectomy
26. Gastrostomy / Feeding jejunostomy

**Part B: Amaliyate Jarahiya Makhsoosa (Speciality Procedures)**

There will be repetition of the procedures listed under this category and those listed under General surgical procedures.

**Laparoscopy and GI Endoscopy**
Diagnostic and therapeutic Upper and Lower GI endoscopy
Diagnostic laparoscopy
Diagnostic Upper GI endoscopy
Laparoscopic Cholecystectomy

**Neurosurgery**
Craniotomy
Management of paraplegia
Peripheral nerve repair
Treatment of nerve injury specific operations
Suturing complex scalp wounds
Trephining

**Urology**
Carcinoma penis
Diagnostic cystoscopy
Inguinal Block Dissection
Meatotomy
Nephrectomy - partial & total
Nephrolithotomy
Orchidectomy
Orchidopexy
Retroperitoneal lymph node dissection
Supra pubic cystostomy
Total amputation of penis
TURP / Open prostatectomy
Ureterolithotomy
Urethral J Urogenital injuries
Urethral dilatation
Varicocele
Vasectomy

**Oncology**
All radical operations - Breast, Thyroid, GI and Facio-maxillary malignancies
Breast lumpectomy
Functional neck node dissection
Gastrectomy / Bowel resection
Metastatic workup

**Plastic Surgery**
Burn resuscitation
Lip surgery
Local blocks in anaesthesia
Minor hand injuries
Nerve repair
Post excision reconstruction
Reimplantation of digits
Skin flap surgery
Stitch craft
Tendon repair PA
Wound debridement

**Paediatric Surgery**
Anorectal anomalies
Circumcision I meatoplasty
Herniotomy
Intercostal aspiration
Laparotomy for peritonitis
Lymph node biopsy
Non operative treatment of volvulus
Orchidopexy
Ostomies
Paediatric emergencies
Pyloromyotomy

**Practical & Viva Voce –**
Practical training of surgical procedures discussed above.