

CENTRAL COUNCIL OF INDIAN MEDICINE

**NISABE TALEEM OF MAHIR-E-TIB
(MUNAFEUL AZA)**

**SYLLABUS OF
DOCTOR OF MEDICINE (M.D.-UNANI)
(PHYSIOLOGY)**

3 YEARS DEGREE COURSE

**61-65, INSTITUTIONAL AREA,
JANAKPURI
NEW DELHI - 110058**

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PRELIMINARY EXAMINATION (First year)

Paper –I

Umoore Tabiya with Biostatistics and Genetics

A: Umoore Tabiya:

- **Tabiyat** : its concepts and comparative study with Modern Physiology.
- Arkan: concepts of Akran & its scientific validation, nazariya, essential elements (constituents) of human body according to Unani concept.
- Mizaj: classification and its correlation with Etidal (Homeostasis)
- Akhlat: classification given by renowned Unani Scholars, Ghalbae Akhlat, scientific validation of Akhlat. Study of Akhlat
- A'za: General description and their classification, Mizaje Aza.
- Arwah: interpretations of Rooh and its classification, concept of Rooh and its Scientific interpretation.
- Quwa: Concept, classification and functions, physiological correlation of Quwate Nafsaniya (Muharrika, Mudrika), Quwate-Hawaniya and Quwate Tabiya.
- Af'aal: Definition, classification of Af'aal according to Quwa.

B: Biostatistics:

I: Research Methodology

- Types of research, Research problem, Hypothesis, Research designs, Research Relevant to Unani System of Medicine

Literary research, Clinical Research,

- **Protocols for research and report writing**
- **Guidelines for Research**
 - (a) WHO
 - (b) ICMR
 - (c) CPCSEA guidelines

II: Bio-Statistics

- Scope and utility of Biostatistics
- Descriptive Statistics

Analysis of Data

Data collection, tabulation and presentation of data
Measure of central tendency – Mean, Median and Mode
Measures of dispersion: Range, quartile deviation, standard deviation

Probability

Definition and laws of probability
Types of probability distribution
NPC and its application size
Randomized samples

Sampling

Types and sample size
Randomized sampling

- Inferential Statistics
 - Correlation and linear regression
 - Karl Pearson correlation coefficient
 - Linear regression equations

Test of significance

't' test
'z' test.

Test of variance

ANOVA one way
ANOVA- two way,
 X^2 –Test

Non-parametric tests

Median test, Mann Whitney U test
Kruskall Wallis test, Fried test

- Vital Statistics
 - Rate and Ratios
 - Standardization of population
 - Risk factors
 - Predictive Values,
 - Odds Ratio
- Pharmacovigilance
 - Introduction and scope in Unani Medicine, its method in brief

C: 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 and diagnostic probes
- Population based DNA testing
- Mutation detection
- Gene therapy

Practical: Clinical Assessment of Mizaj.
Project work – Collection & analysis of data

Paper – II

Applied Physiology (Munafeul Aza) of Musculo skeletal system, Digestive system, Cardiovascular system

A: Nizame Azli Haikali (Musculo skeletal system): Umoomi wa Itlaqi Pahloo (General & applied aspect)

- Huzale Azli (Muscular dystrophy)
- Asbi Azli Ittesali Nuqs (Neuro-muscular Junctional disorder)

B: Nizame Hazam (Digestive system): Umoomi wa Itlaqi Pehloo (General & applied aspect)

- Inhizam (Digestion), Injizab (absorption) of various food constituents & their abnormalities (Carbohydrates, Protein, Fat, minerals & vitamins)
- Qinate Medi Mevi ki Harki Nuqs (Motility disorders of G.I.T), Qinati Medi Mewi ke khamirat ki ahmiyat (Importance of G.I.T hormones)
- Amle Hazam aur uske ghair tabai halat mein Khamirat ka kirdar (Roles of enzymes in digestion & their abnormalities)

C: Nizame Qalbi Urooqi (Cardio vascular system): Umoomi wa Itlaqi Pehloo General & applied aspect.

- Daurane khon ka sadma (Circulatory shock), Fisharud dam Qawi (Hypertension), Suqoote Qalb (Cardiac failure)
- Nuqse eesali (Conduction defects)
- Daurane Ikleeli ka Itlaaqi Pehloo (Applied aspects of coronary circulation)
- Urooqe Nizam Ki Ghair Tabiya (Abnormalities of vascular system)

Practical

Hematological & Serological examination, Routine & Bio-chemical test of stool

Paper III

Nizame Tanaffus aur Makhsoos Ahsasat (Applied Munafeul Aza of respiratory system and special senses)

A: Nizame Tanaffus (Respiratory System): Umoomi wa Itlaqi Pehloo (General and applied aspects)

- Ghazat ki Aapsi tabadile ki ghair tabai Halat (Abnormalities of gaseous exchange)
- Aviation physiology, Deep sea diving
- Suqoote Tanaffus (Respiratory failure), Suqoote tarweeh (ventilator failure)
- Acute respiratory distress syndrome, obstructive & restrictive phenomenon

- B:** Makhsoos Ahsasat (Special senses): General and applied aspect
- Shama ki Feily Nuqs (Functional disorders of smell)
 - Saamiya', Ghishae Tabli ki feli nuqs, Duwar (Functional disorders of hearing and tympanic membrane, vertigo)
 - Inetafi Nuqs (Refractory errors), Nuqse Launi Basri (color blindness), Shibkori (night blindness), Meinier's disease.
 - Nystagmus

Practical : Respirometry, Blood gas analysis, audiometry
To determine visual acuity test by Snellen's chart.
To record field of vision by perimetry.
To determine color vision by Ishihara Chart.

Paper IV

Ghodoode Ghair Naqila, Nizame Asbi aur Nizame Bauli Tanasuli ke Itlaqi Munafeul Aza (Applied Physiology of Endocrine system, Nervous system and Urogenital system)

A: Nizame Ghodoode Ghair Naqila Umoomi wa Itlaqi Pehloo (Endocrine System: General and Applied aspects)

- Kasrat wa Qillate Ifracate Ghodoode Ghair Naqila (Hyper and Hypo secretions of endocrine glands)

B: Asbi Nizam Umoomi wa Itlaqi Pehloo (Nervous System: General and applied aspects)

- Mukhtalif Raqbe aur unki feili Nuqais (Different areas and their functional disorders) e.g. Jisme Hissi (somato-sensory), Jisme Hirki (somato-motor), wernic, Basri (visual), Samai (acaustic) and Shammi raqbe(olfactory area).
- Muqaddam Dimagh (Cerebrum): Tawazun (Equilibrium) and Waza (posture), vestibular & cochlear functions and applied aspects.
- Afferent & efferent connection with cerebrum & brain stem.
- Limbic System and basal ganglion with special emphasis on Thalamus and Hypothalamus.
- Alam ka Munafe ul Aza aur Tarseel (Physiology of pain and its transmission)
- Nukhah (Spinal cord): Saibi aur Nazili Qinaat aur muqamate Maou'f (Ascending and descending tract and their lesions)
- Cranial nerves and its clinical examination..
- Khud aaiyin, Mewi Asbi Nizam aur Inekasat (Autonomic and enteric nervous system and reflexes).

C: Nizame Baule Tanasuli (Urogenital System): Umoomi wa Itlaqi Pehloo General and applied aspect

- I: Nizame Bauli (Urinary System): Kulvi Tabadla (Kidney transplantation), dialysis, Suqoote Kuliya (kidney failure), Nuqoose tabwul disorders (Micturition), Izme ghuddae Mazi Hamida (benign enlargement of prostate gland)
- II: Nizame Tanasul (Genital System): Nuqse Balooghat (Disorders related with Puberty), Uqur (infertility), Jinsi Nuqais (sexual disorders)

Practical: Routine & Biochemical test of Urine, semen analysis and Hormonal assays.

FINAL EXAMINATION (Third Year)

Paper –I

Clinical Physiology

1. To Determine the Effect of Posture and Exercise on blood Pressure, Pulse Pressure, Mean Pressure and Heart Rate.
2. Clinical Examination of Cardiovascular system.
3. Recording and analysis of 12 Lead Electro cardiogram and the measurement of the mean electrical Axis.
4. Determination of Physical Fitness of a subject.
5. Clinical Examination of respiratory system & Cardio Pulmonary Resuscitation (C.P.R)
6. Recording of Chest Movements by stethograph and study the effect of swallowing, coughing breath holding and voluntary hyperventilation.
7. Determination of various lung volumes and capacities by Spirometry.
8. Determination of peak expiratory flow rate.
9. Clinical Examination of nervous system.
10. Study of electroencephalographic tracings of normal human subjects.
11. To record field of vision by perimetry.
12. To determine the reaction time in human subjects.
13. Calculations of the composition and energy content of diet (Unani & Modern).
14. Framing a diet with given specifications
15. To study the Glucose tolerance Curve.
16. Study of the Phenomenon of Human Fatigue by Mosso's Erograph.
17. Study of Electromyography.
18. To determine the resting Metabolic rate and Mechanical efficiency at different grades of exercise.

Practical

Hematoanalysis & Serological test
Blood Transfusion & Blood Banking

Paper –II

Jadeed Tahqeequi Izafaat

1. Properties and Metabolism of Bio-Molecules (Carbohydrate, Protein & Lipid)
2. Metabolic disorders
3. Bone marrow examination
4. Examination of CSF
5. Bio chemical genetics
6. ABO Blood Group – incompatibility reactions
7. Functional disorders of haemopoietic system

Practical

Hematoanalysis & Serological test
Hb electrophoresis
