

SYLLABUS OF KULLIYAT (PRINCIPLES OF UNANI TIBB)

- **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 b. Structure and classification of amino acids, Zwitterion, pK, isoelectric point, peptide bond, Biologically active peptides, Titration curve. Denaturation of proteins. 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 Mentem 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 g f. Effort of 2,3 Biophosphoglycerate

Oxygen derived 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-UI-Aza (Applied Physiology)**

1. **Internal Environment:** Cell members 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, Reticuloendothelial System.

3. **Nutrition and Diet**

- **Kulliyate Umoore Tabiya**

1. **Arkan, Anasir, Listuqussat** ka Ijamati Bayan, Ansir ke Bare men Atibba ka ikhtilaf, Anasire arba ke baseet aur murakkab hone ka saineey mutakah, Anasire badane insani ka qadeem wa jadeed naqriyah.

2. **Nazariya-e-Mizaj**, Hukma wa atibba ke nazriyat aur unke ikhtilafat ki sciency ifadiat, jadeed nazriya-e-badan-e-insan, Mizaj-e-Aaza, Mijaz-e-Asnaf ki raushni mein inka taqabuli Mutalah.

3. **Akhlat** ka nazriyah, Tareef aur Mana, Mukhtalif atibba ke nazriyat, shaikh ka nazriahe-Rutubat-e-oola wa Rutubat-e-Saniyah aur Tibb-e-jadeed ki ru se uski Tauzeeh, aqam-e-rutubat, Akhlat ke aqam aur unka Tazkirah ma afal wa khawas, Shakar-eangoori ka wajood, akhlat men namakiyat ki maujudgi, Injimid-e-Khoon, Rutubat-ebaizah, Rutubat-e-duhniyah, Khuyat ki maujudgi, Tibb-e-jadeed ki raushni men iska jayza

4. **Aaza** ki Tareef, Unani Tib mein aaza (Khalyah, naseej) ka tazkirah, Aza-e-mufrada wa murakkabah ka mafhum, iska sciency taqabuli jayza, Aza-e-Raeesa, Aza-e-Asliya, Aza-e-aaliya, Aza-e-nafsaiyah, Aza-e-Tabiyeah, Aza-e-Haiwaniyah, Aza-e-Tanasulyah, Khidmat-e-Muhayyah, Khidmat-e-Muddiyah, Aza-e-Mutiyaah, Aza-e-Qabilah, iska itlaqi bayan.

5. **Rooh** ka nazriyah, Tareef, Aqam, Muqam, Masalik, Hararat-e-Ghariziah, Hararat-e-Ghareebiah, Hararat –e-Muqassirah, iska taqabuli Mutalah Tibb-e-jadeed ki raushni mein. 6. **Quwa** ka nazriyah wa tareef, shaikh ke mutabiq Rooh, Quwa aur afal ka bahimi taaluq. Quwwat-e-Tabiyeah, Quwwat-e-haiwaniyah, Quwwat-e-Tanasulyah, Inka Taqabali mutalah Tibb-e-jadeed ki raushni mein, ECG ka mutalah.

7. **Afa'al** ki Tareef aqam aur inki misalein

- **Kulliyate Usule Ilaj, Asbab Wa Alamat**

1. Amraz, Asbab, Araz-e-Kuliyah.
2. Ahwal-e-badan, Mukhtalif Atibba ke Nazriyat, unka Sciency taqabuli jayza.
3. Amraz ki jins, Sabab, Marz, Arz.
4. Amraz-e-Mufrada, Su-e-Mizaj Sada, Su-e-Mizaj Maddi Su-e-Tarkeeb, Tafarruq-e-ittehsal, Amraz-e-Murakkaba, chand umoor jinka shumar Amraz men kiya jata hai.
5. Awqat-e-Amraz aur inka sciency taqabuli jayza, Amraz se mutaalliq khusoosi Tazkirah (Marz ka nam aur uski munasibat).
6. Asbab-e-Kulli(Umooi Tazkira), Sitta Zarooriya, Ghair Zarooriya ki Sciency ifadiyat.
7. Asbab: Musakhkhinat, Mubarradat, Murattibat, Mujaffifat, Mufsidat-e-Shakl, Suddah, Majari, Khashunat, Malasat, Khala, Harkat-e-Ghair Tabiyah Ziyadat-e-Azm, Aud se nuqsan, Tafarruq-e-ittehsal, Qarha ke asbab, Warm ke asbab, Mutlaqan dard ke asbab, Infiradi dard ke asbab, Sukun-e-dard ke asbab, Dard se kya Asrat paida hote hain, Asbab-e-Lazzat, Harkat Kyunkar dard pahunchati hai, Akhlat-e-Radiyyah Kyunkar dard pahunchati hai, Riyah Kyunkar dard paida karti hai, Tuhma, badhazmi, Imtila, Ehtibas wa Istifragh ke asbab, Zuf-e-Aza ke asbab, (Muzkura Tamam ka sciency wa Taqabuli Mutalah.
8. Amraz wa Dalail (Alamat) wa Umooi Tazkirah,, Amraz-e-Khassa aur Amraz-e-Shirkiah ke Almat-e-Fariqa, Almat-e-Amziah, Mizaj-e-Motadil ke Almat, Etedal se Kharij ki almat, Imtila ki almat, Her her Khilt ke ghalbe ki almat, Suddah ki almat, Riyah ki almat, Awran ki almat, Almat-e-Tafarruq-e-ittehsal,

- **Kulliyate Nabz wa Baul o Baraz**

1. Nabz, baul wa baraz ka Taqabuli Mutalah
2. Nabz ki tareef, ajnas wa aqam, Mukhtalif afrad ki nabz (Mard, aurat, hamila, ghair hamila, bachch, hawan, bordha) Amraz ki Tashkhees, nabz ke zariyah
3. Baul: Zaraya-e-Istihsal, rang, bu, miqdar, Qiwwam, Shaffafiyat, Takadur, Rusub, Zubda (Jhag) aur Radd-e-Amal, Amraz ki Tashkhees baul ke mushahide ke zariyah.
4. Baraz: Zarayah-e-Istidlal, Rang, bu, Miqdar, Qiwwam, Zubda (Jhag), Amraz ki Tashkhees baraz ke mushahide ke baul mushahide ke zariyah.

- **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 ma' Itlaqi Mutalah, Tadbeeri Tareeqi: Qai, ishal, idrar,

tareeq

5. Ilaj Bil ghiza: Tareef wa tafseel maā itlaqi mutalah Ahkam-e-ghaza wa paani, Ghiza ke kaifiyat, Nauyyiat 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

7. Ilaj Bilyad: Tareef wa tafseel maā itlaqi mutalah, Fasd, Kai, Hajamat, Taleeq.