Notification

The Syllabus of “MAHIR-E-TIB [Doctor of Medicine (Unani)]” has been approved by the Academic Council of the University in its 16th meeting held on 09.11.2019 effective from academic session 2019-20 is hereby notified.

By order of the Vice-Chancellor

Sd/-
Registrar (I/c)
Aryabhatta Knowledge University, Patna

Memo no. : 012/Acad/01-08/AKU/2019-4841 Date:13.12.2019

Copy to:
(i) PA to the Vice-Chancellor, (ii) Pro Vice-Chancellor's Office, (iii) Registrar's Office, (iv) Controller of Examinations, AKU, Patna with copy of Syllabus for information and (v) Shri Vishal Ratan Kumar with copy of Syllabus for uploading the information on University website.

Registrar (I/c)
Aryabhatta Knowledge University, Patna
CENTRAL COUNCIL OF INDIAN MEDICINE

NISABE TALEEM OF

MAHIR-E- TIB MD (MAHIYATUL AMRAZ)

SYLLABUS OF

DOCTOR OF MEDICINE (MD)

3 YEARS DEGREE COURSE
MD 1\textsuperscript{st} YEAR

1. RESEARCH METHODOLOGY AND BIOSTATISTICS

2. ILMUL AHWAL WA ASBAB

3. ILMUL ALAMAT

4. MAHIYATUL AMRAZ UMOOMI MAE JADEED IZAFAT

MD FINAL YEAR

5. ILMUL JARASEEM WA TUFAILIYAT

6. ITLAQI MAHIYATUL AMRAZ NIZAMI MAE JADEED IZAFAT
Research Methodology and Biostatics

PAPER-I
(Common Paper for all Specialties)

PAPER 1
Theory

Teaching Hours 100
100 Marks

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 programme 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

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(i) 't' test
(ii) 'z' test.
(c) Test of variance
   (i) ANOVA one way
   (ii) ANOVA two ways
   (iii) X²
(d) Non-parametric tests
   (i) Median test, Mann Whitney U test.
   (ii) Kruskall Wallis test, Fried test.

Ⅲ Vital Statistics
(a) Rate and Ratios
(b) Standardization of population
    Risk factors
Ilmul Ahwal wa Asbab

PAPER. 2
Theory

Ilmul Ahwal

1) Sabab, Maraz aur Arz
2) Ahwale badan-šehat ,Marz aur Halat-e-salesa
3) Ajnase Amraz
   A) Amraz-e-mufradah
   1) Soo-e-mizaj ,Soo-e-tarkeeb ,Tafarraque-ittesal
   B) Amraz Murakkabah
      Auram wa Basoor
      Waram-e-har
      Auram ghair harra ki aqsam
      Suadavi madda se paida hone wale waram ki aqsam
      Balghami waram ki aqsam
      Reehi awram
      Basoor ki aqsam
4) Amraz-e-Shaar
5) Fasad e Alvaan-e-Jild
6) Nomenclature of diseases
7) Amraz-e-zahira wa batena
8) Amraz-e-Asli wa Shirki

Teaching Hours 100
Marks 100
9) Marz-e-musallam wa ghair Musallam
10) Inteqal, Marz
11) Mutaddi Amraz
12) Mauroosi Amraz

Ilmul Asbab

Asbab Kulli wa Juzvi aur Iski Darjabandi
1) Asbab-e- sabiqa
2) Asbab-e- badia
3) Asbab-e- wasila
Sharaiat -e-Asbab
Asbab-e- Mukhallefa wa ghair Mukhallefa
Asbab-e-Zarooiriya wa ghair Zarooriya
Hawai tabdeeliyon ke asrat
Harkat-e-wa sakoon ke asrat
Neend wa bedari ke asrat
Harkat nafsania ke asrat
Istefrage wa Ehteba ke asrat

Umoomi Asbab

Asbab-e-Hararat
Asbab-e-Baroodat
Asbab-e-Ratooabat
Asbab-e-Yaboosat
Asbab-e-Mufsadate shakal

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Asbab-e-Sudda wa zeeq Majari
Asbab-e-Ittesa-e-Majari
Asbab-e-Khashoonat
Asbab-e-Malasat
Asbab-e-Khala
Asbab-e-Sue Tarkeeb
Asbab-e-Tafarruk-e-Ittesal
Asbab-e-Waram
Asbab-e-Waja
Asbab-e-Taskeen Waja
Waja ke asrat
Lazzat ke asbab
Waja ba sabab Harkat.
Waja ba sabab Khilt
Waja ba sabab Reeh
Asbab-e- tukhma wa Imtela
Asbab Istifrag wa Ehtebas

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PRACTICAL

Ilmul Ahwal wa Asbab

1. Darjate e Amraz Practical demonstration
2. Maddah ke lihaz se awram ki tashkhees.
4. Corelation of Ilmul Ahwal with modern theory
Ilmul Alamat

PAPER 3
Theory

1) Ilmul Alamat

Alamat saheeyah wa alamat marzia
Alamat amraz-e-batena
Alamat amraz zahera
Quwwat Basra ke zariye tashkhees marz
zahiri alamat se Istedlal marz
Andaroooni amraz ki alamat
Afaal aza ke zariye Istedlal
Istedlal ba istefrag wa ehtebas
Istedlal ba waja
Istedlal ba waram
Istedlal ba waza
Istedlal ba Aaraz munaseba
Amraz khassa wa amraz shirkia ki alamat-e-fariqa
Alamat-e-Amzaja
Alamat Mizaj Motadil
Alamat Aarzi mizaj

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Alamat Ghair moatadil mizaj
Alamat wa'aqsaam-e-Imtela
Alamat Akhlat-e-arba
Alamat-e-sudda
Alamat-e-reyah
Alamat-e-waram
Alamat-e-tafarruq-e-ittesal

2) Baul
Qarooorah ka Aam bayan
Muayana baul
Dalayal baul
Alwan-e-baul

Baul ka qiwam wa kadurat
Jhag ke zariye halat badan maloom karna
Rasoob ke zariye halat-e-badan maloom karna
Qarooorah ki kami wa beshi se halat badan maloom karna
Tabaee qaroora
Mukhtalif Umron ka qaroora
Mardon aur Aurton ka qaroora
Hamal Aur Naffaas wali aurton ka qaroora

(a) miqdar (b) qiwam (c) Jhag(Zubda) (d) Khushki (e) Alwan e Baraz (f)
hayat (g) Akhraj-e-Baraz ka waqt (h) Baraze Mahmood (i) Baraze Ghair
Mahmood (j) Baraz-ud-dam
1. Alamate Amzija se Mizaj ki Tashkhees.
2. Alamate imtila se Amraz ki Tashkhees.
3. Alamate imtila se khilte ghalib ki pehchan.
4. Muayene Baul wa Baraz.
Mahiyatul Amraz Umoomi Mae Jadeed Izafat

PAPER. 4

Teaching Hours 100

100 Marks

Theory

1- Introduction and divisions of Pathology

2- Tatabuq (Cellular adaptations)
   (a) Zamoor (Atrophy)
   (b) Tazakhkhum (Hypertrophy)
   (c) Faratul Unseja (Hyperplasia)
   (d) Tanassuj (Metaplasia)
   (e) Khalal e Tanseej (Dysplasia)

3- Zarbe Khalia (Cell injury)
   (a) Etiology and Pathogenesis
      Reversible cell injury
      Irreversible cell injury
   (b) Morphology of Irreversible cell injury
      (i) Nakhar (Necrosis)
      (ii) Apoptosis
      (iii) Ghangarana (Gangrene)
      (iv) Pathologic calcification
4- Shaikhookhee khalia (Cell Ageing)
   (a) Definition and theories of ageing
   b) Organ changes in ageing
5- Diseases of Immunity
   a) The immune system
      (i) General description
      (ii) Organ and cells of immune system
      (iii) Histocompatibility
      (iv) Transplant rejection
6- Amyloidosis
7- Fasadat ratubat-e-badan (Fluid and electrolyte imbalance)
   (a) Tahabbuj (Oedema)
   (b) Qillat-e-ratoobat (Dehydration)
   (c) Kasrat-e-ratoobat (Over hydration)
8- Fasad-e-khoon aur fasad-e-dauran khoon
    (Haemodynamic disorders)
    (a) Hypermia and congestion
    (b) Nazaf-ud-dam (Haemorrhage)
    (c) Sadma (Shock)
    (d) l'akhassur-e-dam (Thrombosis)
    (e) Tasaddud-e-dam (Embolism)
(f) Aflasuddam (Ischaemia)
(g) Infarction

9. Iltehab wa Indemal (Inflammation and wound healing)
(a) Acute inflammation
(b) Chronic inflammation
(c) Wound healing
   (i) Regeneration
   (ii) Repair

10. Ghiza ki kamee wa ziadati ke Amraz (Nutritional disorders)
    (a) Vitamin Deficiencies
    (b) Protein energy malnutrition
    (c) Starvation
    (d) Obesity

11. Environmental diseases
    (a) Environmental pollution
    (b) Injury by physical agent
    (c) Injury by chemical agent

12. Transfusion Medicine (Blood Banking)

Basic Immunology

A. B. O and Rh Group

Clinical significance of other blood groups
Transfusion therapy

The use of whole blood and RBCs concentrates, Blood components

13. Salaat (Neoplasia)

(i) Nomenclature and classification
(ii) Characteristics of tumours
(iii) Carcinogens and carcinogenesis
(iv) Pathologic diagnosis of cancer
Hematology:

1. Collection, Transport and processing of blood samples for different hematological investigations.
2. Haemogram, ESR.
3. Preparation of Stains and interpretation of peripheral blood smear.
5. Clotting profile
6. Clinical pathology
   a. Urine.
   b. Stool.
   c. sputum
   d. CSF Analysis
   e. Peritoneal fluid Analysis
   f. Pleural Fluid Analysis
   g. Pericardial fluid Analysis
   h. Amniotic Fluid Analysis
   i. Semen Analysis
   j. Synovial Fluid Analysis
Ilmul Jaraseem wa Tufailiyat

PAPER. 5
Teaching Hours 100
100 Marks

01. Tadiya wa Taaffun (infection)
Ilm-e-Tib mein Tadiya ka Tassavur
Ufoonat wa Mustavaqad-e-Ufoonat
Tadiya ke Aqsaam (Classification of infection)
Inteqaal taadiya (Method of transmission of infection)
Characters of pathogens
Factors predisposing to microbial pathogeneity

02. Bacteriology
  a. Introduction, Classification, Morphology & Genetics
  b. Growth & nutrition of bacteria,
  c. Qulwin (staining) - The identification of bacteria and staining
  d. Bacteria in Health and Disease.

03. General Description of the following Bacteria
Staphylococcus, Streptococcus, Pneumococci, Neisseria,
Corynebacterium, Bacillus, Clostridium, Enterobacterium,
Pseudomonas, Vibrio, Campylobacter, Helicobacter pylori, Brucella,
Pasteurella, Yersinia, Haemophilus, Bordetella, Spirochaetes, Rickettsia.
Chlamydia, Mycobacteria
03. Virology

General characteristic of viruses

Classification of viruses

Onchogenic viruses

DNA viruses

RNA viruses

Acquired Immune Deficiency Syndrome (AIDS)

Hepatotropic Viruses (Hepatitis A, B, C, D, E, F, G)

04. Mycology

- General introduction and classification
- Superficial mycosis
- Subcutaneous mycosis
- Systemic mycosis

05. Parasitology

Introduction and Classification

Protozoa

Helminthes

06. Diagnostic microbiology - Approach to lab Diagnosis

07. Rapid and Automation method in Diagnostic microbiology

08. Methods of Sterilization and disinfection
Ilmul Jarasim Wa Tufailiyat

PRACTICAL

Clinical Microbiology:

1. Demonstrate of instruments, Reagents and safety in microbiology lab.
2. Staining- Gram staining & Acid fast staining.
3. Methods of collection and transport of specimen and technique used for clinical samples e.g. Blood, Bone marrow, Spleen, Liver, Lymphnodes Aspirates, CSF, Pus formed closed cavities and open wounds.
4. Swabs (Nasal, Pharyngeal, Vaginal, rectal and Conjunctival etc.
5. Culture Media and their Preparation, Inoculation & Uses.
Itlaqi Mahiyatul Amraz Nizami wa Jadeed Azafat

(Applied systemic Pathology with recent advancement)

PAPER. 6

Teaching Hours 100

100 Marks

Theory

1. Disorders of Red Blood cells and Platelets
   (a) Anemia and types
   (b) Bleeding diathesis due to platelet disorders

2. Disorders of Leucocytes and lymph reticular tissue
   (i) Leukemia and lymphomas
   (ii) Acute myeloid leukemia
   (iii) Hodgkin's disease & Non Hodgkin's Disease

3. Amraz-e-Qalb wa urooq (Disease of Heart and blood vessels)
   A) Avaiya-e-Damavi (Vascular disorder)
      i) Salabat-e-shiryan aur aqsam (Arteriosclerosis and types)
      ii) Aneurysma (Aneurysm)
      iii) Waram Avaiya (Vasculitis)
      iv) Dowali (Varicosity)

   B) Heart Disorder
      i) Zubah sadriya (Angina pectoris)
      ii) Maitutat-e-qalb (Myocardial infarction)
      iii) Iltehab batana-e-qalb (Endocarditis)
      iv) Marz-e-qalb Hudari (Rheumatic Heart disease)
v)  Amraz azlat qalb (Cardiomyopathy)
vii) Khalqi amraz qalb (Congenital Heart disease)
viii) Amraz samamat qalb (Valvular Heart disease)
ix) Iltehab ghilaful qalb (Pericarditis)

4. Amraz Nizam Tanaffus (Diseases of Lungs and vessel)
i)  Zaghtuddam Revi (Pulmonary Hypertension)
ii)  Zat-ur-riya (Pneumonia)
iii) Khuraj riya (Lung abscess)
iv)  Diq-e-riya (Pulmonary Tuberculosis)
v)  Iltehab shoab (Bronchitis)
vi)  Nafkhaturriya (Emphysema)
iiii) Zeeq-un-nafas (Bronchial asthma)
iii) Ittesa shoabat-ur-riya (Bronchiektasis)
ix)  Sartan riya (Bronchogenic carcinoma)
x)  Zat-ul-janb (Pleurisy)
xi)  Pneumothorax
xii) Interstitial Lung Disease

5. Amraz-e-Mari, Me’da wa Am’aa
   i)  Achalasia and Hiatus hernia
   ii)  Oesophageal varices
   iii) Reflux oesophagitis
   iv)  Sartan mari
   v)  Waram-e-me’da (Gastritis)
   vi)  Qarha me’di wa asna ashri (Peptic ulcer)
   vii)  Sartan me’da (Gastric carcinoma)
   viii) Qurooh-e-Qoloon (Crohn’s disease & ulcerative colitis)
   ix)  Diq-e-Am’aa (Intestinal Tuberculosis)
   x)  Humme-e-Mevi (Enteric Fever)
   xi)  Zaheer (Dysentery)
xii) Iltehab Ziada Aawar (appendicitis)
xiii) Bawaseer (Piles)

4) Amraz Kabid wa Mararah (Diseases of Hepatobiliary System)
   i) Yarqan (Jaundice)
   ii) Saqoot Kabid (Hepatic Failure)
   iii) Iltehab-e-Kabid (Hepatitis)
   iv) Dubailatul Kabid (Liver Abscess)
   v) Talayyaful Kabid (Cirrhosis of Liver)
   vi) Sartan-e-Kabid (Carcinoma of Liver)
   vii) Hasat-e-Marahar (Cholelithiasis)
   viii) Iltehab-e-Mararah (Cholecystitis)
   ix) Sartan-e-Mararah (Carcinoma of Gall Bladder)

5) Amraz-e-Banqaras (Disease of Pancreas)
   i) Iltehab-e-Banqaras (Pancreatitis)
   ii) Sartan-e-Banqaras (Carcinoma of Pancreas)

6) Amraz-e-Kulliya wa Masana (Disease of Kidney & urinary Bladder)
   i) Saqoot-e-Kulliya (Renal Failure)
   ii) Waram-e-Kulliya Qumbali (Glomerulonephritis)
   iii) Iltehab-e-Hauzul Kulliya (Pyelonephritis)
   iv) Hisat Kulliya wa Masana (Renal wa Bladder Stone)
   v) Iltehab-e-Halib (Ureteritis)
   vi) Iltehab Mujrai Baul (Uretheritis)

7) Male Reproductive System & Prostate
   i) Epididymitis & Orchitis
   ii) Iltehab Ghudda-e-Mazi (Prostatitis)
   iii) Azm Ghudda-e-Mazi (Prostatic Enlargement)

8) Female Genital Tract
i) Vaginitis
ii) Cervicitis
iii) Cervical Cancer
iv) Endometrioses
v) Adenomyosis
vi) Carcinoma of Endometrium
vii) Salpingitis
viii) PCOD
ix) Uterine and Ovarian tumours

9) Breast Disorder
   i) Mastitis & Breast Abscess
   ii) Tumours of the Breast
   iii) Carcinoma of Breast

10) Skin Disorder
    i) Melanocytic Nevus
    ii) Melanoma
    iii) Premalignant & Malignant epidermal tissues
    iv) Psoriasis
    v) Vitiligo
    vi) Eczema
    vii) Scabies
    viii) Fungal Infection
    ix) Lichen planus

11) Endocrine Disorders
    i) Hypo & Hyper Pituitarism
    ii) Diseases of Adrenal Glands
    iii) Thyroid disorders
    iv) Diabetes Mellitus
    v) Gynaecomastia
12) Bone & Joint Disorder
   i) Osteomyelitis
   ii) Osteoarthritis
   iii) Rheumatoid Arthritis
   iv) Gouty Arthritis
   v) Osteoporosis
   vi) Osteomalacia

13) Amraz Dimagh
   i) Iltehab Aghshia Dimagh (Meningitis)
   ii) Encephalitis
   iii) Cerebral Vascular Accidents
   iv) Cerebro meningeal tumours

14) Basic Diagnostic Cytology
   i) Branches of Cytology
   ii) Exfoliative Cytology
   iii) Interventional Cytology
Paper-6 Practicals
Itilaqi Mahiyatul Amraz Nizami wa Jadeed Ezafat

Clinical Biochemistry:
1. Exposure of Students to Lab Instruments and Automation.
2. Manual and Automated Methods of estimation of following Test:
   i. Renal Function Test.
   ii. Liver Function Test.
   iii. Lipid Profile.
   v. S. Amylase, Lipase.
3. Serological Tests
   (Widal, VDRL, HIV I & II, C-RP, HbsAg)
4. Tumour Markers.
5. Thyroid Profile

Histopathology:
1. Exposure of Students to Histopathology Lab Equipments and instruments.
2. Various methods of Preparation of tissue stain.
3. Method of Fixation and reagent employed as fixatives.
4. Method of Examination of Tissues and Cells.
5. Gross examination of fixation of specimen.
6. Staining of Tissue Section.