FORMAT OF NEB EXAMINATION FOR PAKISTANI NATIONALS HAVING FOREIGN MEDICAL & DENTAL BASIC QUALIFICATIONS NOT INCLUDED IN THE SCHEDULES OF THE PM&DC ORDINANCE 1962.

NATIONAL EXAMINATION BOARD FOR FOREIGN MEDICAL GRADUATES WILL CONSIST OF THE FOLLOWING THREE STEPS:

STEP-I (Basic Science Subjects Examination)

STEP-II (Clinical Science Subjects Examination)

STEP-III (OSCE/VIVA Examination)

STEP-I (Basic Science Subjects Examination)

Basic Science Subjects examination will have following two papers:

<table>
<thead>
<tr>
<th>Papers</th>
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<th>Duration</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper-I</td>
<td>150 MCQ's</td>
<td>3 hours</td>
<td>150</td>
</tr>
<tr>
<td>Paper-II</td>
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<td>300</td>
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</tbody>
</table>

Note: Both papers will be held on same day. Candidate who succeed in Step-I(Basic Subjects exam) will be eligible to sit in Step-II (Clinical Science Subjects exam).

STEP-II (Clinical Science Subjects - Theory Examination)

Clinical Science Subjects - theory examination will have following two papers:

<table>
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Note: Both papers of Part-II will be held on same day and candidate who passes Step-II will be eligible to sit in Step-III Examination.
FORMAT OF NEB STEP-III (OSCE/VIVA) EXAMINATION

Consist of fifteen short cases/Assessment stations

15 Stations

(10 Minutes each Station)

5 minutes for examination and 5 minutes for Presentation/Viva/Assessment.

07 Stations

Medicine and Allied

07 Stations

Surgery and Allied

01 Station

Diagnostics

Note: Each station will have 10 marks (5 marks for examination & 5 marks for Presentation/Viva/Assessment and 10 minutes each station (5 minutes for examination and 5 minutes for Presentation/Viva/Assessment.

STEP-I (Basic Science Subjects Examination)

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Each question will carry one mark.

Subjects
1. Applied Anatomy
2. Applied Physiology
3. Applied Biochemistry
4. Pathology
5. Clinical Pharmacology
6. Forensic Medicine
7. Community Medicine

Note: Total 150 MCQ’s (At least 10 from each of above mentioned seven subjects).
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Each question will carry one mark.

Subjects
1. Applied Anatomy
2. Applied Physiology
3. Applied Biochemistry
4. Pathology
5. Clinical Pharmacology
6. Forensic Medicine
7. Community Medicine

Note: Total 150 MCQ’s (At least 10 from each of above mentioned seven subjects).

STEP-II (Clinical Science Subjects - Theory Examination)

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Each question will carry one mark.

Subjects
1. Medicine
2. Behavioural Sciences.
3. Surgery
4. Obst & Gynnae
5. Paeds
6. E.N.T
7. Ophthalmology
8. Psychiatry
9. Dermatology

Note: Total 150 MCQ’s (At least 10 from each of above mentioned nine subjects).

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Each question will carry one mark.

Subjects
1. Medicine
2. Behavioural Sciences.
3. Surgery
4. Obst & Gynnae
5. Paeds
6. E.N.T
7. Ophthalmology
8. Psychiatry
9. Dermatology

Note: Total 150 MCQ’s (At least 10 from each of above mentioned nine subjects).
TABLE OF SPECIFICATION FOR STEP-I BASIC SCIENCE SUBJECTS EXAMINATION

1. Applied Anatomy
   - Histology
   - Embryology
   - Neuroanatomy
   - Gross anatomy

2. Applied Physiology
   - Blood RBCs + WBCs + Immunity
   - Hemostasis + Blood Group
   - CVS
   - Renal/ body fluids /Endo
   - NS (Sensory system/Motor System)

3. Applied Biochemistry
   - Carbohydrate, Lipid and Protein Metabolism
   - Enzymes
   - Vitamins
   - Molecular Biology

4. Applied Pathology
   - Gen pathology
   - Parasitology
   - Microbiology (General 1, Clinical 2)
   - Virology
   - CVS, Resp, GIT and liver/GU
   - Chemical Path
   - Hematology
   - General Pathology and Microbiology including Virology, Mycology
   - Parasitology
   - Haematology, Chemical Pathology, Immunology, Clinical
   - Microbiology
   - Special Pathology

IMPORTANT TOPICS

General Pathology
   - Basic concepts and application of knowledge of the following:
     Cell injury, intracellular accumulations, fatty change and pathologic calcification
   - Acute and chronic inflammations and chemical mediators
   - Transudates and exudates
   - Wound healing by 1st intention and secondary intention
   - Thromboembolism an dDVT
   - Genetics
   - Neoplasia

General Microbiology
   - Structure of bacterial cell, bacterial reproduction, classification and important infections caused by bacteria.
   - Classification and structure of viruses, and important diseases caused by virus.
   - Classification and structure of fungi and important diseases caused by fungi
Plasmids and bacterial resistance
Sterilization and disinfection

**Haematology**
- Etiology, pathogenesis and lab diagnosis of the following:
  - Iron deficiency
  - Megaloblastic anaemia
  - Thalassaemia major and minor
  - Sickle Cell Disease
  - Glucose-6-Phosphate Dehydrogenase Deficiency
  - Hereditary Spherocytosis
  - Acute Leukemias
  - Immune Thrombocytopenic Purpura
  - Disseminated Intravascular Coagulation
  - Von Willebrand Disease
  - Haemophilia
- Important human blood groups
- Safe blood transfusion

**Chemical Pathology**
- Etiology, Pathogenesis and lab diagnosis of:
  - Diabetes Mellitus
  - Ischaemic heart disease
  - Thyroid disease
  - Menstrual irregularities
  - Acidosis
  - Renal failure
  - Liver disease
  - Bone disorders

**Special pathology**
- Etiology, pathogenesis and lab diagnosis of the following:
  - Atherosclerosis, hypertension and IHD
  - COPD, pneumonias, pneumoconiosis
  - Acid peptic disease
  - Hepatitis
  - Carcinoma cervix
  - Carcinoma breast
  - Osteogenic sarcoma
  - Hodgkin's disease
  - Non-hodgkin Lymphoma

**Clinical Microbiology:**
- The etiology, pathogenesis and lab diagnosis of the microbial diseases involving the following:
  - Skin, soft tissue, bones, joints, GIT, Respiratory system, CVS,CNS and genitourinary system.
  - Obstetric, congenital & neonatal infections.
  - Infections in immunocompromised hosts
  - Etiology pathogenesis & Lab diagnosis of diseases prevalent in Pakistan, like Tuberculosis, Malaria, Typhoid, Viral hepatitis, Dengue fever, Tetanus, Viral hemorrhagic fevers, Diphtheria, Diarrheas, Dysenteries, Cutaneous leishmaniasis, Giardiasis, Influenza
Specimen MCQs
(One best pattern from within four or five given options)

General/Clinical Microbiology
Q.No.1 Culture and sensitivity report of pus from infected surgical wound of abdomen reveals isolation of Escherichia coli resistant to a number of antibiotics. The following component of bacteria plays an important role in the development of antibiotic resistance in some bacteria.
   a) Cell Wall
   b) Lipopoly saccharides
   c) Ribosomes
   d) Plasmids
   e) Teichoic acid

Pathology (Histopathology – Diseases of Organs system)
Q.No.2 A 28- year old woman goes to her physician for a routine examination. The cytopathology report of pap smear indicates the presence of severely dysplastic cells (high grade squamous intraepithelial lesion, or HSIL.). A biopsy of the cervix is performed, and on microscopic examination shows cervical intraepithelial neoplasia III (CIN III). Infection with which of the following organisms is most likely to cause her disease?
   a) Candida albicans
   b) Epstein- Barr Virus
   c) Gardnerella Vaginalis
   d) Human Papillomavirus
   e) Trichomonas Vagiatiix

Q. No 3 A 30 years old man complains of a urethral discharge. You perform a Gram stain on a specimen of the discharge and see neutrophils but no bacteria of the organisms listed, the one most likely to cause the discharge is
   a) Treponema Pallidum
   b) Chlamydia trachomatis
   c) Candida albicans
   d) Coxiella bumetii
   e) Legionella pneumophila

Hematology
Q.No 4 A 25 years old female, prime gravid, presented for antenatal check-up Her blood counts revealed hemoglobin 9.5 g/dl.MCV 58 fl and MCH 22 pg. . Blood film examination showed a few target cells. What investigation would you order to exclude diagnosis of Beta Thalassaemia Trait.
   a) Serum Ferritin
   b) Serum Iron concentration
   c) Serum Transferrin levels
   d) Haemoglobin A2 concentration
   e) Haemoglobin F concentration.
Chemical Pathology
Q.No.5 A 35 year old female presented with a nodular swelling in front of lower neck. On examination the swelling was determined to be located in lower part of right lobe of thyroid gland. Which of the following laboratory tests will effectively exclude hyperthyroidism?
   a) Thyroid stimulating hormone
   b) Serum Total T4 level
   c) Thyroid hormone binding globulin
   d) Serum T3 level
   e) Serum Iodine levels

5. Clinical Pharmacology
   Antibacterial
   Antifungal, Antiviral, antiparasitic agents
   CVS
   GIT
   CNS
   Resp
   Endocrines and Diabetes

6. Forensic Medicine
   Medical Law
   Traumatology
   Poisoning

7. Community Medicine
   Topics
   1. a Concept of health & diseases, natural history of disease and levels of prevention, control, elimination and eradication of diseases.
      b. Epidemiology / Biostatistics / Research Methodology
      c. General epidemiology and dynamics of infection disease transmission

   2. Introduction to public health and health system,
   3. Preventive aspects of immunology
   4. Food & Nutrition
   5. Environment (Air, Water, Climate, Noise, Housing Waste disposal) / Entomology / Parasitology
   6. MCH/Reproductive Health/STI
   7. Health education/HMIS/Mental health
   8. Injuries / Accidents /Disasters/Snake bite/Dog/bite Hospital waste management.
   9. Demography and population control
   10. Control and prevention of communicable diseases
   11. Control and Prevention of non-communicable diseases/ cancer
   12. Occupational health / Radiation
   13. Food & Nutrition
   14. Control and prevention of non-communicable and communicable diseases
   15. MCH/Reproductive Health/STI

Specimen MCQs
(One best pattern from within four or five given options)

Epidemiology / Biostatistics
1. The head circumference of new born babies in a nursery were 48 cm, 48.5 cm, 49 cm, 49.1 cm, 49.2 cm, 47 cm, 47.54, 48.7 cm. What is the mean head circumference of these babies?
   a) 48.1 cm
b) 48.3 cm
c) 48.3 cm
d) 48.4 cm
e) 48.5 cm
Key: c

2. The incidence of respiratory tract infections is more in winter whereas it is less in summers. This type of time trend or fluctuation in disease occurrence is termed as:
a) Epidemic
b) Cyclical
c) Seasonal
d) Secular
e) Pandemic
Key: C

Primary Health Care
1. In order to improve the MCH services Government of Pakistan has started a program of training of lady health workers and trained birth attendants. They are selected by local committee and trained locally. By overcoming cultural and communication barriers, they provide primary health care in ways that are acceptable to the community. It shows.
a) Equality
b) Equity
c) Efficiency
d) Community participation
e) Intersectoral coordination
Key: d

Immunology
1. A mother brought her 6 weeks old child to the EPI centre for the first time. The recommended vaccines for this child would be:
a) BCG + Polio
b) BCG + Pentavaient + Polio
c) Pentavaent + polio
d) BCG+ Measles+Polio
e) BCG + Pentavaent + Measles+Polio
Key: b

Food & Nutrition
1. A 3 year old female child presented in hospital from a tribal area of Balochistan with complaints of unsteady gait and pot belly. Clinical examination showed widening of both the wrist joints which vitamin is likely to be deficient in this child?
a) Vitamin A
b) Vitamin B
c) Vitamin E
d) Vitamin D
e) Vitamin k
key: d

Environment
1. A husband and wife belonging to low socioeconomic status of a village were brought to the hospital with history of mental confusion, loss of memory and
labored breathing eventually leading to coma. Coal fire was being used in the house for heating purpose. Which gas is to be blamed for their condition?

a) Carbon dioxide
b) Carbon Monoxide
c) Hydrogen Sulphide
d) Sulphur dioxide
e) Nitrogen dioxide

Key: b

MCH
1. A primigravida with 16 weeks of gestation reported to a hospital for her first antenatal checkup. She gave history of consuming two points of alcohol daily which specific complication is likely to occur?
   a) Spontaneous abortion
   b) Pregnancy induced hypertension
c) Obstructed labor
d) Ante partum hemorrhage
e) Puerperal psychosis

Key: a

2. A nursing mother came to the MCH centre after one month of delivery with complaints of easy fatigability and lethargy. She was worried about her child too, who was not gaining weight. The additional caloric intake in this state to ensure proper weight gaining of the baby should be:
   a) 500 Cal
   b) 550 Cal
c) 800 Cal
d) 1000 Cal
e) 2000 Cal

Key: b

Mental Health
1. A drug abuser describes his drug of abuse as mood elevator, alerter and energizer. Which drug is he taking?
   a) Amphetamine
   b) Barbiturate
c) Cannabis
d) Heroin
e) LSD

Key: a

Accident/Snake Bite
1. A 30 year old lady is bitten by a snake. She complaints of giddiness, Lethargy, Muscular weakness and spreading paralysis. The type of snake involved is:
   a) Sea Snake
   b) Elapid snake
c) Green pit viper
d) Bamboo snake
e) Russell's viper

Key: b

Demography & Population Control
1. A 30 year old lady delivered her 5th girl child in the hospital. She was breast feeding her child. Despite the established role of lactation in contraceptive, obstetrician still
advised additional contraception owing to decreased frequency of feeding. The best choice would be:

- a) Combined pills
- b) Sub-dermal implant
- c) Injectable estrogen
- d) Post coital pills
- e) Prog estogen only pill

Key: e

**Communicable Disease**

1. A woman brought her child with congenital anomalies of heart and cataract. She gave history of mild fever and rash in the first trimester of pregnancy, which settled with mild antipyretics. The possible gestational condition that resulted in these anomalies was:

- a) Measles
- b) Herpes
- c) Rubella
- d) Drugs Taken in pregnancy
- e) Streptococcal scarlet fever

Key: C

2. A woman brings her seven year old boy in the OPD with history of intense headache, vomiting and stiffness of neck. Within a few hours, despite treatment progresses into coma.

   The boy is probably suffering from:

- a) Tetanus
- b) Cerebral Malaria
- c) Meningococcal Meningitis
- d) Non paralytic polio
- e) Sleeping sickness

Key: C

**Non-Communicable Disease**

1. A 10 year old boy presented with complaints of fever accompanied by profuse sweating for the last 1 week. He also complained of multiple joint pains. Serum ASO titre was increased. The likely diagnosis is:

- a) Malaria
- b) Hepatitis B
- c) Dengue
- d) Rheumatic fever
- e) Rickets

Key: d

**Occupational Health**

1. A rubber industry worker presents with abdominal colic and severe anemia. His blood examination reveals basophilic stippling of RBCs and microcytic anemia. What is the likely diagnosis?

- a) Lead poisoning
- b) Benzene poisoning
- c) Radiation effects
- d) Sideroblastic anemia
- e) Worm infestation

Key: a
### TABLE OF SPECIFICATION FOR STEP-II THEORY

**CLINICAL SUBJECTS**

#### 1. Medicine
- CVS
- Resp System
- CNS
- Rheumatology
- GIT
- Liver
- And Pancreas
- Infection
- Hematology & Oncology
- Nephrology
- Endocrine System
- Diabetes Mellitus
- Metabolic diseases
- Genetic disorders

#### 2. Behavioral Sciences
- Use of biopsychosocial Model in Medical & Dental Practice Communication skills, counseling and informational care in health settings
- Psychological growth and development of personality
- Psychological reaction in hospitalization, illness, common health setting such as emergency, intensive care and cancer units.
- Influence of stress and psychosocial factors on common medical, reproductive health and surgical conditions and chronic pain, sleep disturbances and their non-pharmacological managements
- Common psychiatric and psychosocial morbidities such as depressive and anxiety reactions, dissociation and sick-role and their management at primary care level
- Ethics and ethical dilemmas in the life of a doctor

### General Surgery

**Topics**
- Wound healing
- Nutrition
- Fluid and electrolyte balance
- Haemostasis and transfusion therapy
- Post-operative care of surgical patients
- Skin and soft tissues tumors
- Melanoma
- Squamous cell carcinoma
- Basal cell carcinoma
- Tetanus
- Anesthesia & Critical care

### Neck

**Topics**
- Goitre
- Specific thyroid disorders
- Hypothyroidism /Thyrotoxicosis
• Thyroid Neoplasms
• Complications of thyroid surgery
  Parotid gland tumors
  Lymphadenopathy
• Tuberculous lymphadenitis
• Lymphoma
• Parathyroids
• Hyperparathyroidism
• Parathyroid carcinoma
• Parathyroid surgery.

**Chest including Breast**

**Topics**
- Benign breast disease
- Breast infections
- Nipple discharge
- Gynaecomastia
- Carcinoma of Breast
- Pleural infussion/ Pneumothorax
- Bronchogenic carcinoma

**Upper Gastrointestinal Tract**

**Topics**
- Carcinoma of Oesophagus
- Peptic ulcer disease
- Hiatus Hernia & GERD
- Carcinoma Stomach

**Hepatopancreaticobiliary System**

**Topics**
- Gallstones
  • Acute/chronic cholelithiasis
  • Cholodocholithiasis
  • Carcinoma of gall baldder
- Acute & Chronic Pancreatitis
- Carcinoma of Pancreas
- Hydatid cyst of liver

**Clonic, Rectal and Anal disorders**

**Topics**
- Appendicitis
- Large bowel obstruction
- Bleeding per rectum
  • Haenorrhoids
  • Anal fissure
  • Rectal polyes
  • Rectal carcinoma
- Pilonidal sinus
- Inflammatory bowel disease
- Meckel's diverticulum

**Venous, Arterial & Lymphatic Systems**

**Topics**
- Varicose veins
- Lymphoedema
- Chronic limb ischaemia
- Aortic aneurysm
Trauma & Recuscitation

Topics
Primary & Secondary survey of trauma victims
General Managements of Fractures
Head injury

Acute Abdomen

Topic
Acute intestinal obstruction

Spleen

Topics
Haematological disorders
Splenectomy

Hernia

Topics
Inguinal hernia
Femoral hernia
Abdominal wall hernia

Urological Disorders

Topics
Urinary stones
Benign prostatic hyperplasia
Testicular disorders
• Testicular torsion
• Testicular tumours
• Undescended testis
Carcinoma of urinary bladder

4.Obst &Gynae

Antenatal Care
Prenatal diagnosis
Abnormal Presentation
Medical disorder in Pregnancy
Normal labour, preterm labour
Ante partum haemorrhage
Post partum haemorrhage
Ultrasound in obstetrics and Gynae
Menstrual disorder / DUB (Dysfunctional Uterine Bleeding)
Infection of the genital tract
Ectopic Pregnancy
M miscarriages
Displacement of Uterus
Tumors of the genital tract

5.Paeds

Neonatal problems Diarrhoeas ,ARL ,Malnutrition Tropical Paediatrics
Growth and Development in infancy and childhood
Paediatric Gastroenterology/Hepatology
Genetics Metabolic Problems
Paediatric Nephrology
Paediatric Haematology /Oncology
Paediatric Cardiology
Paediatric Endocrinology/ Immune deficiency disorders
Paediatric Pulmonology
Paediatric CNS /Neuromuscular disorders
Paediatric Emergencies/Paediatric Surgery

6.E.N.T
Ear (Deafness Vertigo Ac Som Ch Som,
Complication of Otitis media Secretosy OM
Nose ( Rhinibs Trauma Nose
Throat ( Dysphagia, Infection of Phospix Larynx,
Hoarseness Obstructed airway Foreign boies/Air
Food Passage
Head and Neck tumours ( acoustic Neuroma, Nasphorngeal
Fibroma CA Laynx

7. Ophthalmology
Cataract (Classification Senile cataract Congeital cataract,
Surgeries and Complications of Cataract surgery
Glaucoma ( Classification, Prinery Open Angle Glaucoma
Acute Angle Closure Glaucoma, Management and
Glaucoma Drugs)
Retina (Diabetic Retinopathy Rentiai Detachment
Age related macular Degeneration
Ocular Trauma (Classification Emergency Management )
Squint ( Classification Management
Refractive Errors ( Myopia Hypermeropia,Presbiopia)
Red Eye (Corneal Ulcer Uveities)
Tumors (Retinoblastoma)

8. Psychiatry
From Detection and Primary care management of common psychiatric disorders
Early detection and management of Depression and anxiety related disorders at primary care
level and liaison settings
Management of delirium and epilepsy
Detection, acute management and appropriate referral of patients with psychosis and high
violence and suicide risk.

9. Dermatology
Infections and infestations (bactorial viral),
Fungal, sexually transmitted disease,
Pediculisis, leihmaniasis
Ezema, puplosquamous, pityriasis rosea
Aene, collage, vascular disorder (SLE,
Dermatomyoils, systemic sclerosis.