March 4, 2022

The Board of Directors of Adam University,

Hereby is the official introduction of the exclusive new department and presentation of its purpose and mission and programs undertaken by it.

Department to be introduced: ADAM EC3 (Adam Association Career Counseling Club)

Purpose:

The purpose of the formation of this club is to provide extra coaching classes to the medical students of Adam University for the preparation of national and international licensing exams, namely: NLE, USMLE, NBE, PLAB, AMC etc.

Our purpose is to improve and nourish critical thinking and learning skills of the students, educating them about potential future pathways hence, enabling them to make the right choice about their next step. This is of utmost importance and benefits both the student and coach.

Mission:

Assistance in the formation of promising specialists to prepare students and young professionals for the delivery of practical and theoretical knowledge in the framework of national and international licensed exams

Programs:

Our main preference shall be the preparation of First AID Book along with practice of clinical Multiple- Choice Questions (MCQs). Our focus is to prepare the questions with similar format and difficulty level as those appearing in the licensing exams. These test-based questions will be obtained via UWorld and QBank official subscriptions.

Our plan is to arrange six classes per week, duration of which shall range between 40-50 minutes each.

We shall assess the students' knowledge by holding two assessment tests per month and one Megatest at the completion of each subject or course, the results of which shall be shared with Adam University.

Meanwhile, we are also working on a book "Adam's Guide to MBBS" which upon its completion shall be made available in Adam University's library.

Two Year programme For USMLE, PLAB,NLE, NBE and AMC

Faculty	**Medicine**
Course	**1,2,3,4,5**
Semester	**1,2,3,4,5,6,7,8,9,10**
Total hours	**1156 hours**
Coaching classes	**578**
Practical Mcqs	**100 Practice classes**

High Yield General principle

Subjects	Number of coaching classes	Number of days	Total Hours
Immunology	23	23	46 hours
Biochemistry	63	40	80 hours
Microbiology	55	35	70 hours
General Anatomy	56	37	74 hours
General Pathology	34	25	50 hours
General Pharmacology	35	25	50 hours
Public Health Science	14	8	16 hours

High yield Organ systems

Subjects	Number of coaching classes	Number of days	Total hours
Cardiovascular System	52	40	80 hour
Endocrine system	40	27	54 hours
Neurology and Special senses	69	40	80 hours
GIT	52	34	68 hours
Reproductive system	59	42	84 hours
Renal system	38	24	48 hours

Psychiatry	29	15	30 hours
Respiratory System	33	21	42 hours
Hematology and oncology	49	30	60 hours
Musculoskeletal system, skin and connective tissue	40	23	46 hours

High Yield Gateway subjects

Subjects	Number of coaching classes	Number of days	Total hours
Ophthalmology	45	28	56 hours
ENT	22	14	28 hours
Gynecology	59	40	80 hours
Covid 19	7	7	14 hours

Immunology

1.Lymphoid structure Part 1,Immune organ,Lymph nodes
2.Lymphoid structure part 2,Spleen,Thymus,Lymphatic drainage association
3. Innate Vs Adaptive Immunity
4.MHC I and II,HLA subtypes associated with disease,Function of natural Killer cell
5. Major function B and T cells
6. Difference of B and T cells,Macrophage interaction cytotoxic T cells ,Regulating T cells
7. T and B cells activation
8. Antibody Structure and function,VDJ segments
9. Ig isotype,Antigen type and memory
10. Complement system and disorder
11. Practice 1 (mcqs 1 to 10)
12. Important Cytokines
13. Respiratory Burst and interferons
14. Cell Surface Protein
15. Vaccination,Type 1 hypersensitivity
16. Hypersensitivity type 2,3,4
17. Blood Transfusion reaction, autoantibodies, ImmunodeficienciesPart 1(B cells dissociation)

18. Immunodeficiencies Part 2,T cell dissociation, B and T cell disorders, phagocyte dysfunction)
19. Infections in immunodeficiency, transplant rejection
20. Immunosuppressants
21. Recombinant Cytokines and therapeutic antibodies
22. Practice 2 (mcqs 12 to 21)
23. Immunology review and MCQs practice session

Biochemistry (molecular biology)

1. Central dogma,Nucleotide structure and nomenclature
2. Nucleic acid ,chargaff's rule denaturation and renaturation of DNA
3. Organization of DNA
4. De novo pyrimidine and purine synthesis
5. Purine salvage pathways, purine salvage deficiencies
6. DNA replication
7. DNA mutations and types
8. Large segment deletions, mutations in splice sites, trinucleotides, repeated mutations
9. DNA damage and repair
10. Transcription prokaryotic TC
11. Lactose Operon, Eukaryotic TC
12. Processing of pre-messenger RNA in Eukaryotes, alternative splicing
13. Practice 1 (mcqs 1 to 12)
14. Ribosomal RNA, Transfer RNA and microRNA
15. Genetic code, Translation, post-translation, modification

Cellular biochemistry

16. Cell cycle
17. ER, Cell trafficking
18. Peroxisomes, Proteasome and ubiquitin protein
19. Cytoskeleton elements+ cilia structure
20. Sodium potassium pump, collagen and collagen synthesis
21. Elastin

Laboratory Techniques

22. PCR, Reverse Transcriptase PCR
23. CRISPR-CAS9 system, Gel electrophoresis
24. Southern blotting, Northern blotting, Western blotting, South Western blotting
25. Flow cytometry, DNA microarrays
26. Elisa Test, karyotyping
27. Fluorescence In situ hybridization, molecular cloning
28. Gene expression modification, cre-lox system, RNA interference
29. Practice 2 (mcqs 14 to 28)
30.Genetic terms
31. Linkage disequilibrium, Hardy weinberg Theorem.
32. Imprinting, cystic fibrosis
33. Modes of inheritance, Mitochondrial inheritance
34. Muscular Dystrophies, Numerical chromosome abnormalities
35. Autosomal Trisomies, cri-du-chat syndrome, william syndrome
36. Practice 3 (mcqs 30 to 35)

Nutrition

37. Essential Fatty Acids, Fat soluble and water soluble Vitamins (vitamin A)
38. Vitamin B complex, vitamin C
39. Vitamin D, E, K
40. Zinc + protein allergy malnutrition

Metabolism

41. Enzyme terminology, Rate determining enzymes of metabolic processing
42. Metabolism sites. Summary pathways
43. ATP production, activated carrier, universal electron acceptors, Hexokinase vs glucokinase
44. Glycolysis Regulation, regulation by fructose 2, 6-bisphosphate, pyruvate dehydrogenase complex and deficiency
45. Pyruvate metabolism, TCA cycle, ETC and oxidative phosphorylation
46. Gluconeogenesis, irreversible enzymes,pentose phosphate pathways.
47. Glucose 6-phosphate dehydrogenase deficiency, disorders of fructose metabolism
48. Disorders of Glucose metabolism, sorbitol, lactose deficiency
49. Practice 4 (mcqs 37 to 48)
50. Amino acids, Urea cycle, Transport of ammonia by alanine
51. Hyperammonemia, Ornithine trans-carnaylase deficiency
52. Catecholamine Synthesis, Tyrosine catabolism, phenylketonuria
53. Maple syrup urine disease, alkaptonuria, Homocystinuria
54. Cystinuria, organic Acidemias
55. Glycogen regulation by insulin and Glucagon/Epinephrine Glycogen
56. Glycogen storage disease, Lysosomal storage disease
57. Fatty acid metabolism, Ketone bodies
58. Fasted vs Fed state, metabolic fuel use
59. Lipid transport, key enzymes in lipid transport
60. Major apolipoproteins, lipoproteins functions, Abetalipoproteinemia, familial dyslipidemias
61. Practice 5 (mcqs 50 to 60)
62. First half overview + M.C.Q's=M.C.Q's practice
63. Second half overview+ MCQs practice

MICROBIOLOGY

GENERAL BACTERIOLOGY

1-Important components of bacterial cells (cell wall, cell membrane, nucleoid, ribosomes, villi, flagella, plasmids, transposons, spores).
2-Exotoxins vs endotoxin.
3-Mechanisms of actions of exotoxins and their clinical outcomes.
4- Classification of important groups of bacteria.
5- Bacterial growth curve
6- Classification of culture media.
7- Colonization resistance and clinically important bacteria of normal flora.
8- Clinical aspects of the sterilization process and its various methods and uses of disinfectants in various clinical settings.

9- Clinical aspects of conjugation, transduction and transformation.
10-Clinical uses of bacterial vaccines.
11-Clinical aspects of antimicrobial resistance
12- Clinical aspects of antimicrobial mechanisms of actions .
13-Practice 1 (mcqs 1 to 12)

SPECIAL BACTERIOLOGY

14-Gram positive cocci part 1
▪ Enterococci
▪ Gonococci
▪ Gram negative cocci
15-Gram positive cocci part 2
Meningococci
▪ Staphylococci
▪ Streptococci
16-Gram positive rods:
▪ Bacillus
▪ Clostridia
▪ Diphtheria
▪ Listeria
17-Spirochetes
▪ Borrelia
▪ Leptospira
▪ Treponema pallidum
18-Mycobacteria
▪ MTB, M. Leprae, Atypical Mycobacteria
19-o Gram negative rods part 1
▪ Bacteroides
▪ Bordetella
▪ E. coli
▪ H. influenzae
20-Gram negative rods part 2
Klebsiella
▪ Legionella
▪ Proteus •
21-Gram negative rods part3
▪ Pseudomonas
▪ Salmonella
▪ Shigella
22-o Chlamydia, rickettsia
o Mycoplasma
o Actinomycetes
23-Practice 2 (mcqs 14 to 22)

PARASITOLOGY

24-Ascaris
D. Latum
o Dracunculus
25-Echinococcus
Entamoeba
• Entrobius
26- Giardia
• Hookworm
• Leishmania
27-Plasmodium
• Schistosomes
• Taenia saginata
28-Taenia solium
• Taenia Saginata
• Tenia Solium
29-o Toxoplasma,
• Trichomonas
• Trichuris
30-Trypanosomes,
• Wuchereria
• 31-Practice 3 (mcqs24 to 30)

Viruses

32-Viral structure and replication
33- Adenoviruses ,Corona viruses
34-Dengue Hepatitis
35-Herpes viruses
Human Immunodeficiency Virus (HIV)
36- Influenza virus
oMeasles, mumps, rubella
37-Polio virus
oPox virus
38-Rabies
Rhinoviruses
39-Practice 4 (mcqs 33 to 38)

MYCOLOGY

40-Fungal structure
41-classification of clinically important fungi.
42-dermatophyte

43-tinea versicolor
44-sporothrix
45- histoplasma
46-Coccidioides
47-blastomyces
48-candida
49-aspergillus
50-mucor, rhizopus
51-cryptococcus
53-Practice 5
54- First half overview and mcqs practice
55-Second half overview and mcqs practice 5

GENERAL ANATOMY

Upper limb

1.Fractures of clavicle, humerus, Radius, ulna, scaphoid & hamate
2..Injuries to brachial plexus, cords & branches of brachial plexus Axillary, musculocutaneous nerves .Radial, median & ulnar nerves
3.Dupuytren's contracture, hand infections & palmar wounds with surgical incisions
4.Dislocation of sternoclavicular, shoulder, acromioclavicular joints. elbow, radioulnar & wrist joints
5.Rotator cuff injuries frozen shoulder & calcific supraspinatus tendinitis
6.Use of vessels for cannulation & coronary angiography
7.Carcinoma of breast & its spread Surgical incisions of breast mastectomy, mammography
8. Practice 1 (mcqs 1 to 7)

Lower limb

9.Fractures of hip bone, femur, tibia fibula, calcaneus & talus
10.Neurological examination of leg
11.Varicose veins, cannulation & lacerations of femoral artery, saphenous cutdown, Femoral hernias, groin & hamstring injuries, Calcaneal tendinitis, rupture & bursitis,
12.Injuries to femoral, sciatic, superior gluteal, inferior gluteal tibial & common fibular nerves, plantar nerves morton's neuroma
13.Dislocation of hip joint, patella, hip & knee joint replacement bursitis in knee region, pes planus & clubfoot
14.Ankle sprain, bunion hallux valgus and varus
15. Practice 2 (mcqs 9 to 14)

Abdomen and pelvis

16.Abdominal & inguinal hernias, laparoscopic surgery, abdominal incisions, hydrocele, hematocele, varicocele & carcinoma of testis & scrotum

17.Peritonitis & ascites, peritoneal adhesions, paracentesis, intraperitoneal injections & spread of pathological fluids in various peritoneal compartments with their surgical approach
18.Esophageal varices, hiatal hernia, gastroesophageal reflux, barrett esophagus, pyloric stenosis, gastric & peptic ulcers, carcinoma stomach, applied endoscopy, barium swallow
19.Visceral referred pains, duodenal ulcers, appendicitis, meckel's diverticulum, colonoscopy, diverticulosis & volvulus, applied barium meal
20.Rupture of spleen & splenectomy, splenic needle biopsy
21.Blockage of hepatopancreatic ampulla & pancreatitis, endoscopic retrograde cholangiopancreatography, pancreatic cancer, subphrenic abscess, hepatic lobectomies & segmentectomy, cirrhosis of liver, liver biopsy, gallstones & cholecystectomy & portosystemic shunts
22.Vasculature of abdomen: abdominal aortic aneurysm(stent or graft),abdominal lymph node surgery, chronic thrombosis of inferior vena cava
23.Perinephric abscesses, renal & ureteral calculi with referred pain & renal transplantation
24.Diaphragm & referred pain, injury to phrenic nerve, aortic aneurysm, psoas abscess & diaphragmatic hernia
25.Pelvic fractures & variations of male & female pelvic girdles, pelvimetry, bone marrow biopsy, sacroiliac joint involvement
26.Cystoscopy, rupture of male & female urethra, catheterizations (supra pubic and urethral), bladder cancer
27. Benign prostatic hyperplasia, prostatic cancer, vasectomy
28.Hysterosalpingography, tubal ligation, ectopic pregnancy, uterine prolapse, hysterectomy, carcinoma of uterus, cervix & ovaries, vaginal fistulae, culdoscopy & culdocentesis
29.Disruption of perineal body, episiotomy, cystocele & rectocele, bartholin abscesses & cysts
30.Rectal examination, anal fissures & perianal abscesses, hemorrhoids, anorectal incontinence
31.Pudendal block
32.Disc prolapse
33. Practice 3 (mcqs 16 to 32)

Head and neck

34.Head injuries (fractures and vascular) & intracranial hemorrhages, fracture of mandible,
35.Scalp injuries & infections,
36.Facial lacerations & incisions, facial palsy, trigeminal neuralgia
37.Pulsations of arteries in face & scalp, compression of facial artery, carcinoma of lips
38.Orbital tumors & fractures, injury to nerves supplying eyelids & extraocular muscles, retinal detachment, presbyopia, cataract, glaucoma, corneal ulcers & transplants, horner's syndrome vi. Infection of parotid gland , tumor of parotid gland

and parotid gland stone, mandibular & inferior alveolar nerve block, dislocation of temporomandibular joint
39.Horner syndrome
40. Cleft lip & palate, lingual carcinoma
41. Deflected nasal septum, epistaxis, sinusitis
42. Acute otitis externa & media, tympanic membrane perforations, mastoiditis, motion sickness, hearing loss, meniere syndrome, blockage of pharyngotympanic tube
43. Torticollis, right cardiac catheterization, surgical dissection of carotid triangle
44. Enlargement of thyroid gland, thyroidectomy, injury to laryngeal & recurrent laryngeal nerve, laryngoscopy, aspiration of foreign bodies from laryngopharynx, tracheostomy, tonsillectomy, adenoiditis, esophageal cancer, tracheo-esophageal fistula
45. Cranial nerves injuries and palsie
46.Practice 4 9 mcqs 34 to 45)

Thorax

47.Fractures of sternum, ribs & vertebrae, cervical rib
48.Flail chest, thoracotomy, supernumerary ribs, sternal biopsy, thoracic outlet syndrome, dislocation of ribs, paralysis of diaphragm
49.Intercostal nerve block, thoracocentesis
50.Pulmonary collapse, pneumothorax, hydrothorax, hemothorax, insertion of chest tube, pleuritis, aspiration of foreign bodies, bronchoscopy, lung resection. Segmental atelectasis, pulmonary embolism, hemoptysis, bronchogenic carcinoma, carcinoma of lungs, pleural pain
51.Surgical significance of transverse pericardial sinus, pericarditis, pericardial rub & pericardial effusion, cardiac tamponade, pericardiocentesis
52.Cardiac catheterization, percussion & auscultation of heart, valvular heart diseases, coronary angiography, echocardiography, myocardial infarction, coronary artery disease, angina pectoris, coronary bypass graft, coronary angioplasty, artificial cardiac pacemaker, fibrillation of heart, cardiac referred pain
53.Central venous line
54.Practice 5 (mcqs 47 to 53)
55. First half overview and practice
56.Second half overview and practice

GENERAL PATHOLOGY

1. Cell injury
2. Clinical causes of irreversible and reversible cell injury
3. role of free radical.
4. Apoptosis
5. necrosis and types of necrosis with examples

6.Clinical aspects of intracellular accumulations e.g. dystrophic and metastatic calcification along with clinical significance and examples.
7. Clinical aspects of cellular adaptations with examples. Atrophy, hypertrophy, hyperplasia,
8. Metaplasia, dysplasia
9. Practice 1 (mcqs 1 to 8)
10.Inflammation and its types
11. Vascular and cellular events and chemical mediators of acute inflammation.
12.Morphological patterns & clinical outcomes of acute inflammation
13.Transudate vs exudate with clinical examples
14. Types of chronic inflammation (simple and granulomatous) with clinical examples.
15.Define repair, regeneration, growth factors and scar formation
16.Factors affecting wound healing & pathological aspects of complications of wound healing.
17.Clinical aspects of healing by primary and secondary intention
18. Practice 2 (10 to 17)
19.Neoplasia
20. Nomenclature with clinical examples of benign and malignant tumors.
21. Define protooncogenes and oncogenes with clinical examples.
22.Clinical aspects of carcinogenesis, carcinogenic agents,
23.Clinical aspect of Tumor metastasis and tumor markers
24.Clinical aspects of grading and staging of tumors with laboratory diagnostic methods of tumors.
25.Practice 3 (mcqs 19 to 24)
26.Disorders of circulation
27.Clinical aspects with types and examples of hemorrhage,
28.Clinical aspects with types and examples of Infarction,
29.Clinical aspects with types and examples of thrombosis, emboli
30.Clinical aspects with types and examples of oedema
31.Clinical aspects with types and examples of shock.
32.Practice 4 (mcqs 26 to 31)
33. First half overview and practice
34.Second overview and practice

General Pharmacology

1.Definition of drug, drug nomenclature & sources of drugs.
2.Dosage forms and doses of drugs.
3.Pharmacokinetics: basic principles and their clinical application
4.Route of drug administration.
5.Absorption of drugs and bioavailability
6.Drug reservoirs, distribution and redistribution of drugs, plasma
7.Protein binding and volume of distribution.
8.Bio-transformation of drugs.
9.Excretion of drug, enterohepatic recirculation, plasma half-life,
10..Clearance
11.Practice 1 (mcqs 1 to 10)

12.Pharmacodynamics
13.Mechanism of drug action.
14.Receptors and post receptor molecular mechanism of drug o action o Mechanism of drug action other than mediated through drug
15.receptors.
16.Factors modifying action and doses of drugs.
17.Pharmacogenetics.
18. Adverse drug reactions & drug toxicity/poisoning
19.Drug-drug Interactions
20.Practice 2 (mcqs 12 to 19)
21 Locally Acting Drugs
22. Dermatological drugs
23.Topical drugs
24.Anti-seborrheic, locally acting enzymes.
25.Antiseptics and disinfectants.
26. Practice 3 (mcqs 21 to 25)
27.Autacoids
28.Histamine & antihistamines
29.Eicosanoids
30.Serotonin
31.Substance P
32.Bradykinin
33. Practice 4 (mcqs 27 to 32)
34.First half overview and practice
35.Second half overview and practice

PUBLIC HEALTH SCIENCES

1.Core ethical principles, Informed consent, consent for minors
2.Decision-making capacity, Advanced directives, Surrogate decision-maker
3.Ethical situations part 1
4.Ethical situations part 2, Confidentiality
5.The well patient
6.Disease prevention , Major medical insurance plan
7.Practice 1 (mcqs 1 to 6)
8.Healthcare payment models, medicare and medicaid
9.Hospice care, common cause of death by age, Conditions with frequent hospital readmissions
10.Safety culture, human factors design, PDSA cycle

11.Quality measurements, Swiss cheese model
12.Types of medical errors, medical error analysis
13.Practice 2 (mcqs 8 to 12)
14. Overview and practice

HIGH YIELD ORGAN SYSTEMS

CARDIOVASCULAR SYSTEM

Embryology

1. Heart Embryology, heart morphogenesis
2. Fetal circulation, fetal postnatal derivatives

Anatomy

3. Anatomy of the heart, pericardium, coronary blood supply

Physiology

4. Cardiac output variables
5. Cardiac output equation, starling curve
6. Resistance, pressure flow, cardiac and vascular function curves
7. Pressure volume loops and cardiac cycle
8. Physiological changes in valvular diseases, splitting
9. Auscultation of the heart, bedside maneuver
10. Heart murmurs
11. Practice 1 (mcqs 1 to 10)
12. Myocardial action potential, pacemaker action potential
13. Electrocardiogram
14. Torsades de pointes, congenital long QT syndrome, brugada syndrome,wolff-Parkinsons-White syndrome
15. ECG tracings, Av block
16. Atrial natriuretic peptide, B type natriuretic peptide, Baroreceptors and Chemoreceptors
17. Normal cardiac pressure, autoregulation, capillary fluid exchange.
18. Practice 2 (12 to 17)

Pathology
19. Congenital heart diseases part 1
20. Congenital heart diseases part 2
21. Congenital cardiac defect association, hypertension
22. Hyperlipidemia signs, arteriosclerosis
23. Atherosclerosis, aortic aneurysm
24. Aortic dissection, ischemic heart disease manifestation
25. Evolution of myocardial infarction
26. Diagnosis of myocardial infarction, ECG localization of stem 1
27. Myocardial infarction complications, acute coronary syndrome treatment
28. Cardiomyopathies
29. Practice 3 (mcqs 19 to 28)
30. Heart failure
31. Shock
32. Bacterial endocarditis, rheumatic fever
33. Acute pericarditis, Myocarditis
34. Cardiac tamponade, syphilitic heart disease
35. Vasculitides part 1
36.Vasculitides part 2
37. Cardiac tumors
38. Practice 4 (mcqs 30 to 37)

Pharmacology

39. Hypertension treatment
40. Calcium channel blockers, hydralazine
41. Hypertensive emergency, Nitrates
42. Antianginal therapy, ranolazine
43. Milrinone, sacubitril

ENDOCRINE SYSTEM

Embryology

1. Thyroid development

Anatomy

2. Adrenal cortex and medulla, pituitary gland, endocrine, pancreas cell types

Physiology

3. Insulin
4. Glucagon, hypothalamic pituitary hormones
5. Prolactin
6. Growth hormone, appetite regulation
7. Anti diuretic hormones, adrenal steroids and congenital adrenal hyperplasias
8. Cortisol, calcium homeostasis
9. Parathyroid hormone
10. Calcitonin, thyroid hormones
11. Signaling pathways of endocrine and steroid hormones
12. Practice 1 (mcqs 1 to 11)

Pathology

13. Cushing syndrome
14. Nelson's syndrome, adrenal insufficiency
15. Hyperaldosteronism, Neuroendocrine tumors
16. Neuroblastoma, carcinoid syndrome
17. Pheochromocytoma, insulinoma, glucagonoma
18. Somatostatinoma, zonninger-ellison syndrome, VIPoma
19. Hyperthyroidism vs hyperthyroidism
20. Hypothyroidism
21. Hyperthyroidism
22. Thyroid adenoma. Thyroid cancer, papillary carcinoma
23. Follicular carcinoma, medullary carcinoma, undifferentiated/anaplastic carcinoma
24. Practice 2 (mcqs 13 to 23)
25. Diagnosing parathyroid disease, Hypoparathyroidism, Lab values in hypocalcemia
26. Hyperparathyroidism, familial hypocalciuric hypercalcemia
27.Hypopituitarism, acromegaly, laron syndrome,
28.Syndrome of inappropriate antidiuretic hormone secretion, diabetes insipidus
29. Diabetes mellitus,
30. Type 1 vs Type 2 DM
31. Diabetic ketoacidosis, hyperosmolar hyperglycemic state
32. Multiple endocrine neoplasia

Pharmacology

33. Diabetes mellitus management , injectable drugs
34. Oral drugs
35. Thionamides, levothyroxine, liothyronine
36. Hypothalamic slash pituitary drugs, demeclocycline
37. Fludrocortisone, cinacalcet, sevelamer
38. Practice 3 (mcqs 25 to 37)

39. Overview of embryology, anatomy, physiology and practice
40. Overview of pathology, pharmacology and practice

Neurology and special senses

Embryology

1. Neural development, regional specification of developing brain
2. Central and peripheral nervous system origins, neural tube defects, spina bifida occulta, meningocele myelomeningocele myeloschisis, anencephaly, holoprosencephaly, lissencephaly
3. Posterior fossa malformation, syringomyelia, tongue development,

Anatomy and Physiology

4. Neurons, astrocytes, microglia, ependymal cells
5. Myelin, Schwann cells, oligodendrocytes
6. sensory receptors, peripheral nerves, chromatolysis
7. Neurotransmitter changes with disease, meninges, blood-brain barrier, vomiting center
8. Sleep physiology
9. Hypothalamus, thalamus
10. The limbic system, dopaminergic pathways, cerebellum
11. Practice 1(MCQs practice 1 to 10)
12. Basal ganglia, cerebral cortex regions
13. Cerebral perfusion, homunculus
14. Cerebral arteries, watershed zones, circle of Willis
15. Dural venous sinuses, ventricular system
16. Brain stem ventral view and brain stem dorsal view
17. Cranial nerve nuclei, cranial nerve, and vessel pathways
18. Cranial nerves, vagal nuclei
19. Cranial nerve reflexes, mastication muscles, spinal nerves, spinal cord_lower extent
20. Spinal cord and association tracts
21. Spinal tract anatomy and functions
22. Practice 2(MCQs practice 11 to 21)
23. Clinical reflexes, primitive reflexes, Landmark dermatomes

Pathology

24. Common brain lesions
25. Ischemic brain disease/stroke, transient ischemic attacks, neonatal intraventricular hemorrhage
26. Intracranial hemorrhage
27. Effect of stroke part 1
28. Effect of stroke part 2
29. Aphasia
30. Aneurysms, seizures
31. Fever and heat stroke, Headache

32. Neurodegenerative disorders part 1
33. Neurodegenerative disorders part 2
34. Neurodegenerative disorders part 3
35. Hydrocephalus, Multiple sclerosis
36. Practice 3(MCQs practice 23 to 35
37. Other demyelinating and dysmyelinating disorders
38. Neurocutaneous disorders
39. Adult primary brain tumors 1
40. Adult primary brain tumors 2
41. Childhood primary brain tumors
42. Herniation syndrome
43. Spinal cord lesionsuard
44. Poliomyelitis, Brown-squad syndrome, Friedreich ataxia
45. Common cranial nerve lesions, facial nerve lesions
46. Practice 4(MCQs practice 37 to 45)

Otology

47. Auditory physiology, diagnosing hearing loss, vertigo, normal eye anatomy, conjunctivitis
48. Refractive errors, presbyopia, aqueous humor pathways
49. Glaucoma, uveitis, age-related macular degeneration
50. Diabetic retinopathy, hypertensive retinopathy, hypertensive retinopathy, retinal vein occlusion, retinal detachment
51. Central retinal artery occlusion
52. Pupillary control
53. Horner syndrome, ocular motility
54. CN III, IV, VI palsies
55. Visual field defects, cavernous sinus
56. Internuclear ophthalmoplegia

Pharmacology

57. Epilepsy drugs
58. Practice 5(MCQs 47 to 57)
59. Barbiturators, benzodiazepines, non-benzodiazepine hyptnotics
60. Suvorexant, ramelteon, triptans
61. Parkinson's disease drugs
62. Carbidopa/levodopa, selegiline, rasagiline, neurodegenerative disease drugs
63. Anesthetics-general principles, inhaled anesthetics, intravenous anesthetics
64. Local anesthetics, neuromuscular blocking drugs, spasmolytics, antispasmodics
65. Opoid analgesics, mixed agonists and antagonists opioid analgesics
66. Tramadol, glaucoma drugs
67. Practice 6(MCQs 59 to 66)
68. Overview of embryology, anatomy, physiology, and MCQs practice
69. Overview of pathology and pharmacology and MCQs practice

GIT

Embryology

1. Normal GIT embryology, ventral wall defects, congenital umbilical hernia
2. Tracheoesophageal anomalies, intestinal atresia
3. hypertrophic pyloric stenosis, pancreas, and spleen embryology

Anatomy

4. Retroperitoneal structures
5. Important gastrointestinal ligaments
6. Digestive tract anatomy, digestive tract histology
7. Abdominal aorta and branches, gastrointestinal blood supply, and innervation
8. Celiac trunk, portosystemic anastomoses
9. Pectinate, liver tissue architecture
10. Biliary structure, femoral region
11. Inguinal canal, hernias
12. Practice 1 (MCQs 1 to 11)

REPRODUCTIVE SYSTEM

Embryology

1. Important genes of embryogenesis, early fetal development
2. Embryologic derivatives, types of errors in morphogenesis
3. Teratogens
4. Fetal alcohol syndrome, neonatal abstinence syndrome
5. Twining
6. Placenta
7. Umbilical cord, urachus
8. Vitelline duct, aortic arch derivatives
9. Pharyngeal apparatus, pharyngeal cleft derivatives
10. Pharyngeal arch derivatives
11. Pharyngeal pouch derivatives, cleft lip and cleft palate
12. Genital embryology, sexual differentiation
13. Uterine anomalies, male/female genital homologs
14. Congenital penile abnormalities, descent of testes and ovaries
15. Practice 1 (mcqs 1 to 14)

Anatomy

16. Gonadal drainage
17. Female reproductive anatomy, adnexal torsion
18. Female reproductive epithelial histology, male reproductive anatomy
19. Urethral injury, autonomic innervation of male sexual response
20. Seminiferous tubules

Physiology

21. Spermatogenesis
22. Estrogen, progesteron
23. Oogenesis, ovulation
24. Menstrual cycle
25. Abnormal uterine bleeding, pregnancy
26. Human chorionic gonadotropin, human placental lactogen
27. Apgar score, infant and child development
28. Low birth weight, lactation, manopause, androgens
29. Tanner stages sexua development, precocious puberty
30. Practice 2 (mcqs 16 to 29)

Pathology

31. Sex chromosomes disorders
32. Diagnosing disorders of sex chromosomes
33. Other disorders of sex development, palacental aromatase defficiency
34. Androgen insensitivity syndrome, 5 alpha reductase deficiency , kallmann syndrome
35. Pregnancy complications part 1
36. Pregnancy complications part 2
37. Amniotic fluid abnormalities, hydatidiform mole, choriocarcinoma
38. Hypertension in pregnancy, gynecologic tumor epidemiology
39. Vulvar pathology, imperforate hymen, veginal tumors
40. Cervical pathology, primary ovarian insufficiency, most common causes of anovulation.
41. Functional hypothalamic amenorrhea, polycystic ovarian syndrome, primary dysmenorrhea, ovarian cysts
42. Ovarian neoplasm
43. Uterine conditions
44. Breast pathology, benign breast diseases
45. Breast cancer
46. Practice 3 (mcqs 31 to 45)
47. Penile pathology, cryptorchidism, testicular torsion
48. Varicocele, extra gonadal germ cells tumors, scrotal masses
49. Testicular tumors
50. Hormone levels in germ cell tumors, epididymitis and orchitis, benign prostatic hyperplasia
51. Prostatitis, prostatic adenocarcinoma

Pharmacology

51. Control of reproductive hormones
52. Goserelin, degarelix, estrogens
53. Selective estrogen receptor modulators, aromatase inhibitors, hormone replacement therapy
54. Progestins, antiprogestins, combined contraceptives, copper intrauterine device
55. Tocolytics, danazol, testosterone, methyltestosterone
56. Antiandrogens, tamsulosin, minoxidil
57. Practice 4 (mcqs 47 to 56)
58. Overview of embryology, anatomy, physiology and mcqs practice
59. Overview of pathology, pharmacology and mcqs practice

RENAL SYSTEM

Embryology

1. Kidney embryology, potter sequence syndrome
2. Horseshoe kidney, congenital solitary functioning kidney, duplex collecting system, posterior urethral valves

Anatomy

3. Kidney anatomy and, glomerular structure, course of ureters

Physiology

4. Fluid compartments, glomerular filtration barrier
5. Renal clearance , glomerular filtration rate
6. Effective renal plasma flow, filtration
7. Changes in glomerular dynamics, calculator of reabsorption and secretion rate, glucose clearance
8. Nephron transport physiology
9. Renal tubular defects
10. Relative concentrations along proximal convoluted tubules
11. Practice 1 (mcqs 1 to 10)
12. Renin angiotensin aldosterone system
13. Juxtaglomerular apparatus, kidney endocrine functions
14. Hormones acting on kidney, potassium shifts
15. Electrolyte disturbances, features of renal disorders
16. Acid base physiology, acidosis and alkalosis
17. Renal tubular acidosis

Pathology

18. Castes in urine, nomenclature of glomerular disorders
19. Glomerular diseases
20. Nephritic syndrome
21. Nephrotic syndrome
22. Practice 2 (mcqs 12 to 21)
23.Kidney stones
24. Hydronephrosis, urinary incontinence
25. Acute cystitis, pyelonephritis
26. Acute kidney injury, acute interstitial nephritis
27. Acute tubular necrosis, diffuse cortical necrosis, renal papillary necrosis
28. Consequences of renal failure, renal osteodystrophy
29. Renal cyst disorders, renovascular disease
30. Renal cell carcinoma, renal oncocytoma
31. Nephroblastoma, urothelial carcinoma of the bladder, squamous cell carcinoma of the bladder

Pharmacology

32. Diuretics site of action, mannitol
33. Acetazolamide , loop diuretics
34. Thiazide diuretics, potassium sparing diuretics, electrolyte changes
35. ACE inhibitors, angiotensin II receptor blockers, aliskirl
36. Practice 3 (mcqs 23 to 35)
37. Overview of embryology ,anatomy ,physiology and mcqs
38. Overview of pathology, pharmacology and mcqs

Psychiatry

Psychology

1. Classical conditioning, Operant conditioning, Transference, and countertransference
2. Ego defenses

Pathology

3. Infant deprivation effects, Child abuse, child neglect
4. Vulnerable child syndrome, childhood and early-onset disorders
5. Orientation, amnesias, dissociative disorders
6. Delirium, psychosis
7. Schizophrenia spectrum disorders, mood disorders, manic episode disorders
8. The hypomanic episode, bipolar disorders, major depressive disorders
9. Depression with atypical features, peripartum mood disturbances, grief,
10. Electroconvulsive therapy, a risk factor for suicide completion, anxiety disorder
11. Practice 1(MCQs practice 1 to 10)
12. Panic disorders, phobias, generalized anxiety disorders
13. Obsessive-compulsive disorders, trichotillomania, trauma, and stress-related disorders
14. Diagnostic criteria by symptoms duration, personality, cluster A personality disorder, cluster B personality disorder
15. Cluster C personality disorders, malingering, factitious disorders, factitious disorders imposed on self, factitious disorder imposed on another, somatic symptoms and related disorders, somatic symptom disorder, conversion disorder, and illness anxiety disorder.
16. Eating disorders, gender dysphoria
17. Sexual dysfunction, sleep terror disorders, enuresis, narcolepsy
18. Substance use disorder, stages of changes in overcoming addiction
19. Psychiatric emergencies
20. Psychoactive drug intoxication and withdrawal 1
21. Psychoactive drug intoxication and withdrawal 2
22. Practice 2(MCQs practice 12 to 21)

Pharmacology

23. Psychiatric conditions, central nervous system stimulant
24. Typical antipsychotics, atypical antipsychotics
25. Lithium, Buspirone, antidepressants
26. Selective serotonin reuptake inhibitors, serotonin-norepinephrine reuptake inhibitors, tricyclic antidepressants
27. Monoamine oxidase inhibitors, atypical antidepressants, antidepressant discontinuation syndrome, opioid withdrawal, and detoxification
28. Practice 3(MCQs practice 23 to 27)
29. Overview and MCQs practice

RESPIRATORY SYSTEM

Embryology

1. Lung development, congenital lung malformations
2. Alveolar cell types, neonatal respiratory distress syndrome

Anatomy

3.Respiratory tree
4.Lung anatomy, diaphragm structures

Physiology

5. Lung volumes, determination of physiologic dead space
6. Ventilation , lung and chest wall
7. Respiratory system changes in the elderly,hemoglobin, oxygen content of blood
8. Methemoglobin, oxygen hemoglobin dissociation curve
9. Cyanide vs carbon monoxide poisoning
10. Pulmonary circulation, Pulmonary vascular resistance
11. Alveolar gas equation, oxygen deprivation
12. Ventilation/ perfusion mismatch, carbon dioxide transport
13. Response to high altitude, response to exercise
14. Practice 1 (mcqs 1 to 13)

Pathology

15. Rhinosinusitis, epistaxis, head and neck cancer, deep venous thrombosis
16. Pulmonary emboli, mediastinal pathology
17. Flow volume loops
18. Obstructive lung diseases
19. Restrictive lung diseases, sarcoidosis
20. Inhalation injury and sequelae, pneumoconiosis
21. Mesothelioma, acute respiratory distress syndrome
22. Sleep apnea, pulmonary hypertension
23. Physical Findings in select lung diseases, atelectasis
24. Pleural effusions, pneumothorax
25. Pneumonia, natural history of lobar pneumonia
26. Lung cancer
27. Lung abscess, pancoast tumor,superior vena cava syndrome

Pharmacology

28. Histamine 1 blockers, guaifenesin, N-acetylcysteine
29. Dextromethorphan, pseudoephedrine, pulmonary hypertension drugs
30. Asthma drugs
31. Practice 2 (mcqs 15 to 30)
32. Overview of embryology, anatomy, physiology and practice
33. Overview of pathology, pharmacology and practice

Hematology and oncology

Embryology

1. Fetal erythropoiesis, hemoglobin development
2. Blood group, hemolytic diseases of the newborn

Anatomy

3. Hematopoiesis, neutrophils
4. Erythrocytes, thrombocytes, monocytes, macrophages
5. Eosinophils, basophils, mast cells, dendritic cells
6. Lymphocytes, natural killer cells, b cells, t cells, plasma cells
7. Practice 1(MCQs 1 to 6)
8. Hemoglobin electrophoresis, platelet plug formation
9. Platelet plug formation, coagulation, and kinin pathways
10. Vitamin K-dependent coagulation pathways

Pathology

11. Pathological RBC forms part 1
12. Pathological RBC forms part 2
13. RBC inclusions
14. Practice 2(MCQs 8 to 13)
15. Microcytic hypochromic anemias part 1
16. Microcytic hypochromic anemias part 2
17. Macrocytic anemias
18. Nonmegaloblastic anemia, normocytic, normochromic anemias
19. Nonhemolytic, normocytic anemias
20. Intrinsic hemolytic anemias
21. Extrinsic hemolytic anemias
22. Interpretation of iron studies, leukopenias, neutrophil left shift
23. Heme synthesis, porphyrias, and lead poisoning
24. Iron poisoning, coagulation disorders
25. Platelet disorders
26. Mixed platelet and coagulation disorders, Hereditary thrombosis syndromes leading to hypercoagulability
27. Practice 3(MCQs 15 to 26)
28. Blood transfusion therapy, leukemia vs lymphoma
29. Hodgkin vs non-Hodgkin therapy, Hodgkin lymphoma
30. Non-Hodgkin lymphoma
31. Multiple myeloma
32. Myelodysplastic syndromes, leukemias
33. Chronic myeloproliferative disorders
34. Polycythemia, chromosomal translocations
35. Langerhans cell histiocytosis, Langerhans cell histiocytosis, tumor lysis syndrome
36. Hemophagocytic lymphohistiocytosis

Pharmacology

37. Heparin, direct thrombin inhibitors

38. Warfarin, heparin vs warfarin
39. Direct factor Xa inhibitors, thrombolytics, ADP receptor inhibitors
40. Antiplatelet phosphodiesterase inhibitors, glycoprotein inhibitors, cancer drugs-cell cycle, cancer drugs-targets
41. Antitumor antibiotics, anti-metabolites
42. Alkylating agents, microtubule inhibitors
43. Cisplatin, etoposide, irinotecan, hydroxyurea
44. Bevacizumab, erlotinib, cetuximab, imatinib
45. Rituximab, bortezomib, tamoxifen
46. Trastuzumab, dabrafenib, rasburicase, key chemotoxicities
47. Practice 4(MCQs 28 to 46)
48. Overview of embryology anatomy and physiology and MCQs practice
49. Overview of Pathology and pharmacology and MCQs practice

Musculoskeletal, Skin and Connective Tissue

Anatomy and Physiology

1. Rotator cuff muscles, Arm abduction
2. Wrist region, hand muscles
3. Upper extremity nerves
4. Brachial plexus regions
5. Distortion of the hand, knee exam
6. Lower extremity nerves
7. The action of hip muscles, ankle sprains, Signs of Lumbosacral radiculopathy
8. Neurovascular pairing, Motoneuron action potential to muscle contraction
9. Types of muscle fibers, Vascular smooth muscles contraction and relaxation
10. Muscle Proprioceptors, bone formation, cell biology of bone

11. Practice 1(MCQs 1 to 10)

Pathology

12. Overuse injuries of the elbow, wrist, and hand injuries
13. Common hip and knee conditions
14. Common and childhood musculoskeletal conditions
15. Common pediatric fractures, achondroplasia, osteoporosis
16. Osteopetrosis, rickets, osteitis deformans, avascular necrosis of bone
17. Lab values in bone disorders, gout
18. Primary bone tumors
19. Osteoarthritis vs rheumatoid arthritis
20. Calcium pyrophosphate deposition disease, systemic juvenile idiopathic arthritis
21. Seronegative spondyloarthritis, psoriatic arthritis, ankylosing spondylitis, inflammatory bowel disease, Reactive arthritis
22. Practice 2(MCQs 12 to 22)

23. Systemic lupus erythematosus, mixed connective tissue disease, antiphospholipid syndrome
24. Polymyalgia rheumatica, fibromyalgia, polymyositis, dermatomyositis
25. Neuromuscular junction diseases, Raynaud phenomenon, scleroderma

Dermatology

26. Skin layers, epithelial cell junctions
27. Dermatologic macroscopic terms, dermatoscopic microscopic terms
28. Pigmented skin disorders, Seborrheic dermatitis
29. Common skin disorders
30. Vascular Tumors of skin
31. Skin infections
32. Autoimmune blistering skin disorders, other blistering skin disorders
33. Practice 3(MCQs 23 to 32)
34. Miscellaneous kin disorders, burn classification
35. Skin cancer, basal cell carcinoma, keratoacanthoma, Melanoma, squamous cell carcinoma

Pharmacology

36. Arachidonic acid pathways, acetaminophen
37. Aspirin, celecoxib, non-steroidal anti-inflammatory drugs, leflunomide, Bisphosphonates
38. Tereparadite, Gout drugs, TNF-alpha inhibitors.
39. Overview of Anatomy, physiology and Pathology and MCQs practice
40. Overview of dermatology and pharmacology and MCQs practice

HIGH YIELD GATEWAY SUBJECTS

Ophthalmology

16. The red eye (management)
17. Ocular and orbital injuries (relevance basic information, anatomy and function)
18. Ocular and orbital injuries (when to examine and how to examine)
19. Ocular and orbital injuries (management, treatment skills)
20. Amblyopia and strabismus (relevance basic information)
21. Amblyopia and strabismus (how to examine and interpret the findings)
22. Amblyopia and strabismus (management)
23. Practice 2(mcqs 13 to 22)
24. Neuro Ophthalmology (relevance and basic information)
25. Neuro Ophthalmology (how to examine)
26. Neuro Ophthalmology (how to interpret the findings part 1)
27. Neuro Ophthalmology (how to interpret the findings part 2)
28. Eyelid, lacrimal and orbital diseases(relevance and basic information)
29. Eyelid disorders
30. Lacrimal disorders
31. Orbital disorders
32. Ocular manifestations of systemic disorders (relevance, diabetes mellitus)
33. Ocular manifestations of systemic disorders (hypertension)
34. Ocular manifestations of systemic disorders (pregnancy, sickle cell anemia, thyroid disease, sarcoidosis)
35. Practice 3 (mcqs 24 to 34)
36. Ocular manifestations of systemic disorders (dry eye syndrome, malignancy, acquired immunodeficiency syndrome, syphilis

Pharmacology

37. Topical ocular diagnostic drugs
38. Topical ocular therapeutic drugs
39. Systemic side effects of glaucoma medications
40. Ocular side effects of systemic drugs part 1
41. Ocular side effects of systemic drugs part 2
42. Ocular side effects of systemic drugs part 3
43. Practice 4 (mcqs 36 to 42)
44. Overview of eye examination, acute and chronic vision loss, the red eye, ocular and orbital injuries and mcqs practice
45. Overview of amblyopia and strabismus, neuro ophthalmology. Eyelid, lacrimal and orbital disease, ocular manifestations of systemic diseases, pharmacology and mcqs practice.

E.N.T (otorhinolaryngology)

1. Anatomy of the ear
2. Anatomy of the middle ear
3. Anatomy of the inner ear
4. Physiology of the inner ear
5. Wabers and rennies test
6. Otosclerosis
7. Presbycusis

8. Utrical, saccule
9. Semicircular canals
10. Practice 1 (mcqs 1 to 9)
11. Meniere's disease
12. Cholesteatoma
13. Otitis media and externa
14. Rhinosinusitis
15. Ludwig Angina
16. Juvenile angiofibroma
17. Torus palatinus, nasopharyngeal CA
18. Retropharyngeal abscess, peritonsillar abscess
19. Sialadenosis, sialadenitis
20. Oral leukoplakia, oral candidiasis, TMJ dislocation
21. Practice 2 (mcqs 11 to 20)
22. Overview and practice

Gynecology

1. Menstrual Cycle
2. Tumor markers, sexual difference
3. Primary Amenorrhea
4. Secondary Amenorrhea
5. Polycystic Ovarian Disease(PCOS)
6. Contraceptive methods
7. Menopause
8. Menarche, Normal Female Development
9. Dysmenorrhea, Endometriosis, Adenomyosis
10. Dysmenorrhea Diagnosis and treatment, Tenner Stages, Menarche
11. Practice 1 (MCQS Practice 1 to 10)
12. Abnormal Uterine Bleeding
13. Cervicitis, Pelvic Inflammatory Disease I
14. Pelvic Inflammatory Disease II
15. Bartholin Cyst, Uterine Leiomyoma(Fibroids)
16. Precocious Puberty, Delayed Puberty
17. Cervical Carcinoma I
18. Cervical Carcinoma II
19. Endometrial Carcinoma
20. Ovarian Tumor, Gestational Age Measurement By Fundal Height
21. Congenital Adrenal Hyperplasia
22. Practice 2 (MCQs practice 12 to 21)
23. Infertility
24. Pelvic Organ Prolapse, Vulvar Cancer
25. Benign Breast Disorder
26. Breast Carcinoma
27. Physiology of Normal Pregnancy
28. How to calculate EDD

29. Prenatal diagnostic testing, Quad Screening, Definition of gravida, parity, How to calculate Gestational age, Diagnosis of pregnancy
30. Alloimmunization, RH Isoimmunization
31. ABO Hemolytic disease of newborn, Peripheral Edema In Pregnancy, Intrauterine Growth Restriction
32. Urinary Tract Infection, Diabetes in Pregnancy
33. Practice 3 (MCQs practice 23 to 32)
34. Non-Stress Test Interpretation, Contraction Stress Test, Biophysical Profile
35. Types Of Fetal Deceleration
36. Labour, Normal Labour and Delivery
37. Failure Of Progression of labor, Postpartum Hemorrhage
38. Uterine Inversion, Uterine Prolapse
39. Postpartum Labor, Fetal Malpresentation
40. Normal physiological changes in pregnancy
41. Sheehan syndrome, definition
42. Teratogen
43. Overview of the teratogenic drugs, torch infection
44. Practice 4 (MCQs practice 34 to 43)
45. Prenatal diagnostic testing
46. Teratogens, Spontaneous abortion
47. Abortion and its types, elective termination of pregnancy
48. Placental abruption, Vasa recta
49. Gestational and chronic hepatitis
50. Preeclampsia and Eclampsia, hyperemesis gravidarum, intrauterine growth
51. Perpurium, Sheehan syndrome, lactation, and breastfeeding
52. Gestational trophoblastic disease
53. Multiple gestations, shoulder dystocia, episiotomy

54. Vaginismus, primary ovarian failure, lichen sclerosis, ectopic pregnancy
55. Cervical incompetence, SLE in pregnancy, external cephalic version
56. Ectopic pregnancy, Alloimmunization/ RH isoimmunization, lactation, and mastitis
57. Practice 5 (MCQs practice 45 to 56)
58. Overview and Mcqs practice of 1st half
59. Overview and Mcqs practice of 2nd half

COVID 19

1. Severe acute respiratory syndrome coronavirus 2
2. Lecture 2
3. Lecture 3
4. Lecture 4
5. Lecture 5

6. Lecture 6
7. Practice 1 (mcqs 1 to 6)