

**FURTHER DETAILS REGARDING MAIN TOPICS OF
PROGRAMME No. 06/2018 (Item No.12,13,14,15,16,17)**

ASSISTANT SURGEON/CASUALTY MEDICAL OFFICER

HEALTH SERVICES

(Category No.486/16,356/17,357/17,358/17,423/17,535/17)

PART I

Salient Features of Indian Constitution

Salient features of the Constitution - Preamble- Its significance and its place in the interpretation of the Constitution.

Fundamental Rights - Directive Principles of State Policy - Relation between Fundamental Rights and Directive Principles - Fundamental Duties.

Executive - Legislature - Judiciary - Both at Union and State Level. - Other Constitutional Authorities.

Centre-State Relations - Legislative - Administrative and Financial.

Services under the Union and the States.

Emergency Provisions.

Amendment Provisions of the Constitution.

Social Welfare Legislations and Programmes

Social Service Legislations like Right to Information Act, Prevention of atrocities against

Women & Children, Food Security Act, Environmental Acts etc. and Social Welfare

Programmes like Employment Guarantee Programme, Organ and Blood Donation etc.

RENAISSANCE IN KERALA

Towards A New Society

Introduction to English education - various missionary organisations and their functioning- founding of educational institutions, factories,printing press etc.

Efforts To Reform The Society

(A) Socio-Religious reform Movements

SNDP Yogam, Nair Service Society, Yogakshema Sabha, Sadhu Jana Paripalana Sangham, Vaala Samudaya Parishkarani Sabha, Samathwa Samajam, Islam Dharma Paripalana Sangham, Prathyaksha Raksha Daiva Sabha, Sahodara Prasthanam etc.

(B) Struggles and Social Revolts

Upper cloth revolts.Channar agitation, Vaikom Sathyagraha, Guruvayoor Sathyagraha, Paliyam Sathyagraha. Kuttamkulam Sathyagraha, Temple Entry Proclamation, Temple Entry Act .Malyalee Memorial, Ezhava Memorial etc.

Malabar riots, Civil Disobedience Movement, Abstention movement etc.

Role Of Press In Renaissance

Malayalee, Swadeshabhimani, Vivekodayam, Mithavadi, Swaraj, Malayala Manorama, Bhashaposhini, Mathnubhoomi, Kerala Kaumudi, Samadarsi, Kesari, Al-Ameen, Prabhatham, Yukthivadi, etc

Awakening Through Literature

Novel, Drama, Poetry, *Purogamana Sahithya Prasthanam, Nataka Prashtanam*, Library movement etc

Women And Social Change

Parvathi Nenmenimangalam, Arya Pallam, A V Kuttimalu Amma, Lalitha Prabhu.Akkamma Cheriyan, Anna Chandi, Lalithambika Antharjanam and others

Leaders Of Renaissance

Thycaud Ayya Vaikundar, Sree Narayana Guru, Ayyan Kali.Chattampi Swamikal, Brahmananda Sivayogi, Vagbhadananda, Poikayil Yohannan(Kumara Guru) Dr Palpu, Palakkunnath Abraham Malpan, Mampuram Thangal, Sahodaran Ayyappan, Pandit K P Karuppan, Pampadi John Joseph, Mannathu Padmanabhan, V T Bhattathirippad, Vakkom Abdul Khadar Maulavi, Makthi Thangal, Blessed Elias Kuriakose Chaavra, Barrister G P Pillai, TK Madhavan, Moorkoth Kumaran, C. Krishnan, K P Kesava Menon, Dr.Ayyathan Gopalan, C V Kunjuraman, Kuroor Neelakantan Namboothiripad, Velukkutty Arayan, K P Vellon, P K Chathan Master, K Kelappan, P. Krishna Pillai, A K Gopalan, T R Krishnaswami Iyer, C Kesavan. Swami Ananda Theerthan , M C Joseph, Kuttippuzha Krishnapillai and others

Literary Figures

Kodungallur Kunhikkuttan Thampuran, KeralaVarma Valiyakoyi Thampuran, Kandathil Varghese Mappila. Kumaran Asan, Vallathol Narayana Menon, Ulloor S Parameswara Iyer, G Sankara Kurup, Changampuzha Krishna Pillai, Chandu Menon, Vaikom Muhammad Basheer. Kesav Dev, Thakazhi Sivasankara Pillai, Ponkunnam Varky, S K Pottakkad and others

GENERAL KNOWLEDGE AND CURRENT AFFAIRS

General Knowledge and Current Affairs

PART II

HUMAN ANATOMY

General Anatomy

General Embryology

Upper Limb

Lower Limb

Thorax

Head and Neck

Brain and Spinal Cord

Abdomen, Pelvis and Perineum

Genetics

BIOCHEMISTRY

Proteins

Carbohydrates

Lipids

Metabolism of Lipids

Metabolism of Amino acids

Haemoglobin

Vitamins

Mineral Metabolism

Maintenance of Homeostasis

Nucleic Acids and Molecular Biology

Plasma Proteins and Immunoglobulins

Biochemistry of Cancer

Clinical Chemistry

HUMAN PHYSIOLOGY INCLUDING BIO-PHYSICS

Hematology

Cardiovascular System

Respiratory System

Gastrointestinal System

Renal System

Skin and Temperature regulation

Nerve - muscle physiology

Nervous System

Special Senses

Audition

Endocrinology

Physiology of Reproduction

FORENSIC MEDICINE AND TOXICOLOGY

Forensic Medicine

1. Definition of forensic medicine, forensic pathology and medical jurisprudence

2. Introduction to the subject, historical aspects of forensic medicine

3. Inquest procedures

4. Courts in India and their powers. Supreme Court, High Court, Sessions Court,

Assistant Sessions Court and Magistrate Courts.

5. Court procedures. Summons, warrant, Conduct money, Oath / affirmation, types of

witnesses, recording of evidence, conduct of doctor in witness box, perjury, hostile

witness.

6. Medical certificates and medico legal reports. Birth, death, wound, drunkenness,

potency, offence cases, intimation, notification.

7. Death sex

8. Definition, diagnosis and certification (as per MCCD rules), somatic, molecular and

brain death. Sudden natural deaths, suspended animation. Changes after death.

(a) Algor mortis, Livor mortis, Rigor mortis, cadaveric spasm, cold stiffening, heat stiffening

(b) Decomposition, modified forms of decomposition, estimation of time since

death.

(c) Common post mortem artifacts.

9. Identification

(a) Definition.

(b) Identification of persons, dead bodies and remains of a person by sex, age,

biometry, dental features, scars, moles, tattoos, dactylography, personal belongings, photography, superimposition, DNA.

10. Medico legal autopsy and exhumation

- (a) Definition of medico legal and clinical / pathological autopsy.
- (b) Objectives, procedures and formalities of medico legal autopsy.
- (c) Preservation of articles and tissues of importance during autopsy.

11. Mechanical injuries or wounds

- (a) Definition of wound, injury, hurt, assault, battery.
- (b) Classification of injuries, description of blunt force and sharp force injuries.
- (c) Fire arms – principles, types, examination and interpretation of fire arm wounds. Comparison microscopy.
- (d) Medico legal aspects of injuries: Difference between ante mortem and post-mortem injuries, determination of different types of injuries, defense wounds, hesitation cuts, fabricated injuries, simple and grievous hurt, suicidal, accidental and homicidal injuries, causes of death by mechanical injuries, legal classification of fatal injuries.
- (e) Regional injuries: Injuries to head, neck, thorax, abdomen, pelvis, genitalia, vertebral column and bones.
- (f) Injuries due to traffic occurrences.
- (g) Injuries due to physical agents and their medico legal importance: Heat, cold, electricity and lightning. Explosion injuries.

12. Asphyxial deaths: Definition, causes, types, post-mortem appearances and medico

legal significance of violent asphyxia deaths like hanging, strangulation, suffocation,

smothering, choking, drowning, traumatic asphyxia.

13. Medico legal aspects of deaths due to starvation-forced feeding.

14. Human sexual functions:

- (a) Potency, sterility, virginity, pregnancy, delivery.
- (b) Abortion, MTP, sexual sterilization, artificial insemination and their legal aspects.
- (c) Sexual offences and abnormal sexual practices.
- (d) Legal aspects of the above.

15. Infant and childhood deaths: Viability and determination of intrauterine age of the

foetus, live birth, still birth, dead born. Sudden infant death syndrome, child abuse.

16. Biological fluids:

- (a) Blood – preservation and dispatch of samples, importance of blood groups in disputed paternity, hazards of blood transfusion.
- (b) Seminal and salivary stains preservation, dispatch and importance of grouping.
- (c) Principles of laboratory tests for identification of the above and interpretation of the results.

17. Forensic psychiatry:

- (a) Definition and brief overview of common mental illnesses.
- (b) True and feigned mental illnesses.
- (c) Civil and criminal responsibilities of mentally ill persons.
- (d) Indian mental health act with special reference to admission, care and discharge of mentally ill persons.

18. Medical jurisprudence:

- (a) Indian medical council and state medical councils, their functions and disciplinary control.

- (b) Duties and rights and privileges of a registered medical practitioner.
- (c) Professional conduct, etiquette and ethics in medical practice.
- (d) Professional secrecy and privileged communication.
- (e) Medical negligence: Civil, criminal, contributory negligence, vicarious responsibility, res ipsa loquitur, prevention of medical negligence and defence in medical negligence suits.
- (f) Consent: Types, age in relation to consent, consent in relation to mental illness and alcohol intoxication, consent in emergency situations.
- (g) Consumer protection act.
- (h) Certification of births, deaths, illness, fitness, disability.

19. Forensic toxicology:

- (a) Definition and general principles of management of a case of poisoning.
- (b) Medico legal duties of a doctor in a case of poisoning, preservation and dispatch of viscera for chemical analysis. Role of chemical examiner's laboratory and forensic science laboratory in brief.
- (c) Diagnosis and principles of therapy and medico legal aspects of the following poisons, giving special emphasis to those of regional importance.
 - i) Corrosive poisons: strong mineral acids, alkalies and organic acids - (carbolic, formic and oxalic acid).
 - ii) Metallic poisons: Lead, Arsenic and Iron.
 - iii) Animal poisons: snake and scorpion bites.
 - iv) Deliriants: Dhatura, Cannabis and Cocaine.
 - v) Inebriants: Methyl and Ethyl alcohol.
 - vi) Asphyxiants: Carbon monoxide, carbon dioxide, Hydrogen sulphide and Cyanides.

vii) Cardiac Poisons: Cerbera Odollam, Cerbera thevitia, Nerium odorum.

viii) Insecticides: Organophosphorous compounds, carbamates and Organocholoro compounds, Aluminium phosphide and Zinc phosphide.

(d) Drug abuse and dependence.

(e) Inorganic non metallic poisons: Phosphorous.

(f) Organic vegetable irritants: Abrus precatorius, capsicum, calotropis, Semicarpus anacardium, Croton.

(g) Convulsants: Strychnine.

(h) Paralytic agents: Curare.

(i) War gases and industrial gases.

(j) Chloral hydrate

(k) Mechanical poisons.

MICROBIOLOGY

I. General microbiology

1. Introduction to microbiology

2. Morphology of bacteria comparison with other microbial forms

3. Growth, nutrition culture media

4. Identification of bacteria

5. Bacterial genetics

6. Antibacterial agents and antibiotic sensitivity test

7. Infection - Source and spread of infection

8. Sterilisation and disinfection

9. Response to microbial infections

II. Systematic bacteriology

Gram positive Cocci-Staphylococci, Streptococci, Pneumococci

Gram negative Cocci- Neisseria

Gram positive Bacilli-Corynebacterium, Listeria, Bacillus

Mycobacteria, Nocardia, Actinomyces

Clostridia, Nonsporing anaerobes

Gram negative Bacillus-Haemophilus, Bordetella, Brucella, Enterobacteria /

Yersinia

Pseudomonas, Pasteurella, Acinetobacter

Vibrio / Campylobacter

Mycoplasma, Legionella, Rickettsia, Chlamydia

Spirochetes

III. Virology

1. General characteristics of viruses

2. Virus host interaction

3. Replication of virus

4. Pox virus, Herpes, Adenovirus

5. Papova, Retrovirus

6. Myxoviruses

7. Picorna virus

8. Hepatitis, Miscellaneous

9. Rhabdo virus

10. Arboviruses

11. Oncogenic viruses

12. Bacteriophages

IV. Immunology

1. Introduction, classification, type and cells involved in immunity

2. Antigen, antibodies
3. Complement in health and diseases
4. Hypersensitivity
5. HLA antigens in health and diseases
6. Immunodeficiency diseases
7. Serological test in medical practices
8. Autoimmunity
9. Tumour and transplantation
10. Immunoprophylaxis and immunotherapy

V. Parasitology

1. Introduction of parasitic disease
2. Protozoal infections – Amoebiasis, Plasmodium, Leishmaniasis, Trypanosoma, Giardia, Balantidium, Cryptosporidium, Trichomonas, Toxoplasma, Pneumocystis – laboratory diagnosis of protozoal infection
3. Helminthus – intestinal nematodes, tissue nematodes, cestodes, trematodes
– laboratory diagnosis of helminthic infections

VI. Mycology

1. Introduction – classification of fungi and general principles of lab diagnosis
2. Superficial infections
3. Subcutaneous infections – Mycetoma, Rhinosporidiosis
4. Systematic mycosis
 5. Opportunistic fungi
 - 6.

PATHOLOGY

Cell injury

Infectious diseases

Circulatory disturbances

Growth disturbances

Miscellaneous disorders

Haematopathology

Cardiovascular pathology

Respiratory pathology

Renal and urinary tract pathology

Pathology of gastrointestinal tract

Liver and Biliary tract pathology

Lymphoreticular system.

Reproductive system.

Osteopathology

Endocrine Pathology

Neuropathology

Dermato-pathology

PHARMACOLOGY

General pharmacology and basic concepts of clinical pharmacology

Autonomic nervous system

Autacoids and related drugs

Central nervous system

Cardiovascular system

Drugs affecting blood and blood formation

Respiratory system

GIT

Drugs acting on Endocrine system

Chemotherapy

Toxicology

Miscellaneous

National health programmes

Infective/Parasitic conditions

Medical emergencies

COMMUNITY MEDICINE

I. Concept of health and disease

1. Definition, concepts and evolution (history) of public health

2. Definition of health, holistic concepts of health including the concept of spiritual

health, appreciation of health as a relative concept, dimensions and determinants

of health

3. Characteristics of agent, host and environmental factors in health and disease and

the multifactorial etiology of disease.

4. Understanding the concept of prevention and control of disease

5. Understanding the natural history of disease and application of interventions at

various levels of preventions

6. Introduction to various health indicators

7. Health profile of India

II. Social and behavioural sciences

1. Concept of sociology and behavioural science, Clinico-socio-cultural and demographic evaluation of the individual, family and community
2. Assessment of barriers to good health and health seeking behaviour
3. Role of family in health and disease
4. Socio-cultural factors related to health and disease in the context of urban and rural societies
5. Assessment of socio-economic status, effect of health and illness on socioeconomic status
6. Doctor-patient relationship
7. Social psychology, community behaviour and community relationship, hospital sociology and psychology
8. Social security – health insurance: Organized sector, unorganized sector, special groups (Eg: elderly)
9. Impact of urbanization on health and disease
10. Poverty link to health and disease and poverty alleviation programmes
11. Intelligence – IQ and EQ
12. Personality – Types, Interpersonal relationships
13. Attitude, Behaviour, habits
14. Emotions, frustrations, role of emotions in health and coping with emotions
15. Conflicts – internal, interpersonal and conflict resolutions, defense mechanisms
16. Stress and coping skills – integrated (Psychiatry)
17. Ethics

18. Learning – Types and skills

19. Development and health interface – poverty and health, poverty alleviation

programme, health of the marginalized, sustainable and inclusive development

20. Gender and health including gender based violence, epidemiology of violence and

its prevention and control life skill education

III. Environment and Health

1. Water: concepts of safe and wholesome water, sanitary sources of waterborne

diseases, water purification process, water quality standards.

2. Physical, Chemical and bacteriological standards of drinking water quality and

tests of assessing bacteriological quality of water

3. Health hazards of air, water, noise, radiation pollution.

4. Concepts of water conservation, rainwater harvesting and global warming.

5. Concepts of solid waste, human excreta and sewage disposal.

6. Awareness of standards of housing and its effect of housing on health.

7. Role of vectors in the causation of diseases.

8. Identifying the features of vectors and their control measures.

9. Life cycles of vectors and advantages and limitations of various vector control

measures.

10. Mode of action, application cycle of commonly used insecticides and rodenticides.

11. Urban waste management.

12. Recent issue in environmental health.

(a) Stockholm convention

(b) Basel convention

(c) Kyoto Protocol

13. Radiation prevention and control

Health promotion and education / communication for behavioural change
(Information,

education, communication)

Nutrition

Occupational health

Bio-statistics

Basic epidemiology

Epidemiology of specific diseases: Communicable and noncommunicable

Demography and vital statistics

Reproductive and child health

School health

Urban health

Health care system in India

Health planning, management and administration

Disaster management

Legislation and public health

International health

Health care waste management

Health care of elderly

Mental health and behavioural problems

Development and health interface

Genetics

Disability

OPHTHALMOLOGY

Acute conjunctivitis, Trachoma, Allergic conjunctivitis, Pingecula, pterygium, Xerosis/

bitot spots, Dry eye, Angular conjunctivitis, neonatal conjunctivitis, subconj hemorrhager,

D/D of conjunctival and limbal nodule

Chronic conjunctivitis, Dry eye, membranous conjunctivitis, Inclusion conjunctivitis

Corneal Inflammations: Corneal ulcers-bacterial, fungal, viral, Mooren's ulcer, Vitamin

A deficiency and keratomalacia, exposure keratitis, neuroparalytic keratitis, corneal

blindness, eye banking, eye donation, keratoplasty, arcus senilis, corneal oedema, deep /

interstitial keratitis, degenerations and dystrophies, overview of keratorefractive surgery.

Scleritis, episcleritis

Iridocylitis, Panophthalmitis, Endophthalmitis

Systemic associations of uveitis, Choroiditis, Coloboma iris, ocular albinism, vitreous

hemorrhage - causes

Synchisis syntillans, Asteroid hyalosis.

Angle closure glaucoma, open angle glaucoma, steroid induced glaucoma, lens induced

glaucoma including surgery and management

Cataract and management, cong. Conditions, surgery and complications, lens

abnormality, secondary glaucomas, congenital glaucoma

Fundus changes in diabetes, hypertension, anaemias, pregnancy induced hypertension,

haematological disorders, myopia

Photocoagulation

Retinal vascular diseases

Central retinal artery occlusion, central retinal vein occlusion, retinal detachment,

retinopathy of prematurity, retinitis pigmentosa, retinoblastoma, Pappilledema, optic

neuritis, optic atrophy

Awareness of amblyopia, types of squint, paralytic, non-paralytic

Common causes of proptosis, orbital cellulites, cavernous sinus thrombosis

Dacryocystitis - congenital, acute, chronic, epiphora

Ectropion entropion, trichiasis, ptosis, lagophthalmos, symblepharon, blepharitis,

Chalazion, refractive error, myopia, hypermetropia, Astigmatism, presbyopia, aphakia /

pseduophakia, Anisometropia, overview of keratorefractive surgery.

Chemical injuries, open globe injuries, closed globe injuries and first aid treatment

including sympathetic injuries.

Siderosis bulbi, Chalcosis, medico legal aspects.

Definition and types of blindness.

Causes of blindness

Promotion of eye donation

NPCB, Vision 2020

Eye camps

Symptomatic disturbances of vision, overview of recent advances in ophthalmology

Lasers in Ophthalmology

Enucleation - Indication, technique

Eye and systemic diseases including AIDS

Causes of sudden / partial / painless dimension of vision

Ocular malignancy - retinoblastoma and malignant melanoma of choroid

Pharmacology

Chronic side effects of systemic medication, local anaesthetics, viscoelastics, steroid and

NSAIDS

OTORHINOLARYNGOLOGY

Ear

Introduction to diseases of ear Topics: Diseases of external ear (with special mention on

wax, otomycosis, foreign body, keratosis and malignant otitis externa.

Diseases of middle

ear: Acute otitis media, otitis media with effusion, chronic suppurative otitis media -

TTD, AAD, complications of middle ear infections. Deafness - classification, causes,

investigations, early detection of deafness in children and rehabilitation (special mention

to audiometry, otosclerosis, learning and speech rehabilitation.

Disease of inner ear: Vertigo - classification, causes, investigations and management

(special mention of Meniere's disease, positional vertigo and acoustic neuroma)

Nose and paranasal sinuses

Rhinitis – etiology, classification and management (special mention of allergic rhinitis,

atrophic rhinitis and allergic fungal rhino-sinusitis.)

Acute sinusitis (in detail), chronic sinusitis (in detail)

Complications of infections of nose and paranasal sinuses

Facio-maxillary injuries (in detail), epistaxis, DNS and nasal polyp (special emphasis on

FESS)

Tumours of nose and PNS (special mention of inverted papilloma, nasopharyngeal

angiofibroma and malignancy)

Throat

Tonsils and adenoids (special mention of Quinsy, patches in oral cavity and pharynx)

Neck space infections – Ludwig’s angina, retropharyngeal and parapharyngeal abscess

Hoarseness – diagnosis and management

Stridor – diagnosis and management

Malignant lesions of larynx and laryngo-pharynx

Dysphagia – causes, investigations and management (special mention of malignancy)

Foreign bodies of aero-digestive tract – diagnosis, management and complications,

endoscopies in ENT

MEDICINE AND ITS ALLIED SPECIALITIES

I. Nutrition and nutritional disorders

(a) Nutrition requirements

(b) Protein calorie malnutrition in adults

- (c) Obesity
- (d) Vitamin deficiencies
- (e) Vitamin excess
- (f) Hypo and Hypervitaminosis A & D

II. Fluid and electrolyte balance

- (a) Hypovolemia and dehydration
- (b) Acidosis
- (c) Alkalosis
- (d) Hyponatremia + Hypernatremia
- (e) Hypokalemia + Hyperkalemia

III. Disturbance of body temperature

Infections

Approach to fever and PUO

URI including sinusitis

LRTI – Bronchitis and community acquired pneumonia

Tuberculosis

Gastroenteritis, Cholera, food poisoning

Amoebiasis

Helminthic infections, Bacillary dysentery

Acute viral hepatitis chronic

Viral hepatitis malaria

Filariasis

Chickenpox,

Herpes zoster

Dengue fever,

Chickungunya

Typhoid,

Leptospirosis

Common exanthematous fevers

Skin and soft tissue infections including cellulitis

UTI

HIV AIDS

Sepsis

Rabies

Tetanus

Common fungal infections

Influenza and other respiratory viral infections

Brucellosis

Rickettsia

Meningitis

Common gram negative infections

Common gram positive infections

IV. Immunology

Role of B and T Lymphocytes

Immunoglobulin

Immune reaction

Anaphylaxis, Urticaria, Angioedemas

V. Primary Immune deficiency disorders

VI. Genetics

Clinical Genetics

VII. Environmental and occupational problems

(a) Common poisonings organophosphate and carbamate sedatives, hypnotics,

antipsychotics, TCA, Rat poison + paracetamol, formic acid, methyl alcohol, Odollum

(b) Bites and stings, snake bite, scorpion sting + others

(c) Alcohol abuse

(d) Radiation hazards

(e) Hanging, drowning, electrical injuries

VIII. Medical disorders in pregnancy

IX. CVS

Coronary circulation

Coronary artery diseases

ECG and X-ray interpretation

Rheumatic fever and RHD

Congenital heart disorders

Corpulomonale

Hypertension and hypertensive heart disease

Cardiac failure

Peripheral vascular diseases

Infective endocarditis

Cardiomyopathies

Pericardial disease

Rhythm disturbances

DVT + pulmonary embolism

X. GI system

Approach to patient with Jaundice

Approach to patient with Ascites

Physiology of absorption and investigation procedures

Acid peptic diseases

Malabsorption syndrome and tropical sprue

Drug / toxin induced hepatitis and NASH

IBS

Inflammatory bowel disease

Disease of colon and rectum

Abdominal tuberculosis

Chronic liver disease

Upper GI bleed

Haemochromatosis and Wilson's disease

XI. Respiratory system

Bronchial asthma

COPD

Suppurative lung disease

Pleural diseases

Bronchogenic carcinoma

Respiratory failure

ILD

XII. Haematology

Bleeding disorders

Coagulation disorders

Acute Leukemias

Chronic Leukemias

Haemolytic anaemias Fe

Deficiency anaemia

Macrocyte and Megaloblastic anaemia

Plasma cell disorders

Polycythemia

Lymphoma

Aplastic anaemia + Agranulocytosis

HUS and TTP

XIII. Renal medicine

Acute renal failure

Chronic renal failure

Glomerular disease

Nephrotic syndrome RFT

XIV. Central nervous system

Functional

Anatomy

Physiology and Investigation

Migraine and cluster headache

Seizures and epilepsy Ischemic

Stroke

Hemorrhagic stroke

Approach to a case of vertigo

Extrapyramidal disorders

Peripheral Neuropathy

Spinal cord disorders

Motor neuron disease and myasthenia

CNS tuberculosis

Demyelination

Cerebellar disorders

Dementias, Delirium

Pituitary dysfunction and tumour

Endocrine disease related to gonads

XV. Geriatrics

Normal ageing and age-related common problems

Drug therapy in elderly

XVI. Critical care

Severe sepsis and shock

Acute LVF + Acute severe asthma

Cardiopulmonary resuscitation status

Epileptics

Approach to coma

Management of hepatic encephalopathy

DIC

Emergency management of acute coronary syndrome

Bioterrorism and disaster management

XVII. Rheumatology

Rheumatoid arthritis

SLE

Spondyloarthropathies

Degenerative joint disorders

Approach to chronic backache

Inflammatory muscle disease

XVIII. Endocrine disease

Diabetes Mellitus

Hypothyroidism

Hyperthyroidism

Thyroiditis and other thyroid disorders

Parathyroid disorders + Tetany

Metabolic bone disease + Osteoporosis + Vitamin deficiency

Cushings disease + syndrome

Addison's disease

XIX. Pain and principles of palliative care

Assessment and treatment of chronic pain

XX. Clinical pharmacy and therapeutics

General principles of drug therapy

Common drug interactions

Common adverse reactions

Monitoring drug therapy

Rational prescription writing

PSYCHIATRY

Classification of psychiatric disorders

Aetiological factors in psychiatric disorders

Clinical interview and mental state examination

Organic brain syndrome

Substance abuse

Bipolar disorders

Depressive disorders

Schizophrenia

Major manifestation of psychiatric illness

Treatments used in psychiatric illness

Neurotic, stress related and somatoform disorders

Sleep disorders

Legal aspects of psychiatry

RADIOLOGY

Production of X-rays

Biological changes

Skeletal radiology chest and Mediastinum

Gastrointestinal system

Hepatobiliary system

Genitourinary system

Neuroimaging modalities

Emergency radiology

DERMATOLOGY

Infections of skin

Eczematous dermatitis

Bullous skin lesion collagen disorder

Pigmentary disturbances

Maculopapular,

Squamous lesion

Neoplastic lesions

Lesions of skin appendages

Gastrogenic disorders

Leprosy and national leprosy control programmes

SURGERY AND ITS ALLIED SPECIALITIES

Principles of Surgery, genetics, history of surgery, surgical ethics

Trauma

Metabolic response to trauma

Wound healing and complications

Critically injured patient including Triage

ATLS, poly trauma, disaster management

Different types of wounds and their management

Shock: Types, pathogenesis and management, Haemorrhage, Haemostasis, Blood

transfusion, Burns

Fluid and electrolyte balance, nutritional support

Pre-operative and post-operative care – emphasis on intensive care and high dependency

sterilization

Surgical sepsis – specific infection, Nosocomial infection, antibiotic policy

Immunology and organ transplantation, HIV and surgeon, Hepatitis B

Principles of imaging techniques

Suture materials and anastomosis

Skin and soft tissues

Normal structure – Ulcers, sinus and fistula, cysts and benign tumours

Pre-malignant conditions, malignant tumours, skin cover

Arteries - Applied anatomy and physiology, investigation, trauma, acute ischaemia,

chronic ischaemia, Arterial aneurysms and A. V. fistula, amputations

Veins - Applied anatomy and physiology, varicose veins and venous ulcers, DVT and

superficial thrombophlebitis

Lymphatics and lymph nodes - Applied Anatomy and physiology, lymph oedema -

primary, secondary, lymph cyst - cystic hygroma

Inflammations - Lymphangitis, lymphadenitis, malignant neoplasms - lymphomas

Head and neck - Head injuries, facio maxillary injuries, salivary glands, mouth and face,

cleft lip, cleft palate, oral cancers and premalignant conditions, jaw tumours, ranula,

misc-Branchial cysts, arid fistula, carotid body tumours.

Thyroid and parathyroid thyroglossal cyst and fistula Breast - Applied anatomy and

physiology, investigation, fibrocystic diseases, inflammation, tumours

Chest - diaphragm, mediastinum, chest injuries: Thoracic outlet compression syndrome,

heart and pericardium, pleura and lungs.

Gastrointestinal tract - oesophagus, anatomy and physiology, congenital anomalies,

dysphagia, achalasia and other motility disorders, oesophageal perforation, gastrooesophageal reflux diseases, tumours.

Stomach and Duodenum - Anatomy, physiology, embryology, congenital, peptic ulcer

disease (APD), Upper GI haemorrhage, tumours, pyloric stenosis

Liver - Applied anatomy and physiology, trauma, liver abscess, cysts of the liver, portal

hypertension, tumours, principles and management of obstructive jaundice.

Biliary system – congenital disorders, gall stone, cholecystitis,
Cholangiocarcinoma

Spleen – Anatomy and physiology, trauma – splenic conservation, indication
for

splenectomy

Pancreas – Anatomy, development and physiology, congenital anomalies,
acute

pancreatitis, chronic pancreatitis including calcific pancreatitis, tumours,
surgical

jaundice

Vermiform appendix – Anatomy, appendicitis, neoplasm

Small and large intestine – Anatomy, physiology, embryology, congenital
disorders,

inflammatory bowel disease including typhoid, tuberculosis, tumours,
intestinal

obstruction.

Rectum and anal canal – ano-rectal anomalies, prolapse, haemorrhoids, ano-
rectal sepsis,

fissure, fistula, tumour

Miscellaneous – Abdominal trauma, minimally invasive surgery, peritoneum
and

retroperitoneum, hernia and abdominal wall, mesentery, surgical audit and
day care

surgery

Genitourinary system – congenital conditions, trauma, infections, stones,
hydronephrosis,

tumours of kidney, tumours of bladder, retention of urinary bladder,
haematuria, torsion,

undescended testis, epididymo-orchitis, carcinoma penis, phimosis, prostate testicular

tumours, benign prostatic hypertrophy, carcinoma prostate, adrenal gland surgery

pheochromocytoma and conn syndrome.

ORTHOPAEDICS

Traumatology

Definition of a fracture and types of fracture and general principles of management of

fracture

Complications of fracture – open fractures and pathological fracture

Fracture clavicle, fracture neck of humerus and shoulder dislocation

Fracture humerus (Shaft) and supracondylar fracture

Intercondylar fracture and Olecranon fracture

Elbow dislocation and forearm fracture

Monteggia fracture and Galeazzi's fracture

Colle's fracture and fracture scaphoid

Fracture spine and traumatic paraplegia

Fracture pelvis and hip fracture – fracture of femur

Hip dislocation and fracture shaft of femur

Meniscus tear and fracture patella

Leg fracture

Ankle injuries – Pott's fracture

Hand injuries

Extensor mechanism injuries of knee

Fracture of tarsal bones

Cold orthopaedics

CTEV and flat foot

CDH

Torticollis, congenital pseudoarthrosis of tibia and arthrogryphosis multiplex congenita

osteomyelitis septic arthritis tuberculosis – spine, hip, knee, elbow, wrist and other sites

Perthe's disease and slipped upper femoral epiphysis

Rickets and osteomalacia

Rheumatoid arthritis and ankylosing spondylitis

Intervertebral disc prolapse

Scoliosis and spondylothesis

Bone, tumour, osteochondroma, simple bone cyst, aneurysmal bone cyst and endochondroma, giant cell tumour, osteosarcoma and Ewing's sarcoma,

Chondrosarcoma, multiple myeloma, metastatic bone diseases and osteogenesis

imperfecta

Nerve injuries – Radial nerve, ulnar nerve, sciatic nerve, amputations and osteoarthritis

hip, knee, cerebral palsy

PHYSICAL MEDICINE AND REHABILITATION

Introduction to physical medicine and rehabilitation disability process and progression of

disabilities concept of Impairment / disability and hard cap

Principles of physical therapy – various modalities and therapeutic exercises

Principles of occupational therapy its application in the rehabilitation of various

disabilities

Principles of prosthetics and rehabilitation aids their application in the rehabilitation of disabilities

Disability evaluation – principles people with disabilities Act – 1995

Pain management principles

Principles of rehabilitation of people with disabilities

To understand the basic principles of disability conclusion and for certification purposes

To get exposed to the potentials of socia-vocation rehabilitation of the various describing

conditions in the light of the 1995 Act people with disabilities (equal opportunities etc)

Act 1995

To get oriented to basic principles of community based rehabilitation of people with

disabilities

RADIOTHERAPY

Cancer epidemiology and possible etiological factors, screening for cancer

Principles of cancer chemotherapy and chemotherapeutic agents used in the management

of cancer

Hormone treatment in cancer

Principles of radiation oncology, radioactive sources – Teletherapy, Brachial therapy and

nuclear medicine

Methods of radiotherapy and recent advances

Common malignancies, diagnosis and treatment

ANAESTHESIOLOGY

Introduction – scope of Anaesthesiology

Pre-anaesthetic check-up premedication

General anaesthesia – Basal anaesthesia triads of anaesthesia Inhalational agents

Intravenous anaesthetic agents

Regional analgesia – subarachnoid and epidural analgesia, other techniques of regional

analgesia and agents used.

Equipments in anaesthesia and methods of oxygen therapy

Intravenous fluid therapy, intraoperative monitoring

Complication in anaesthesia and post-operative period

Cardio-pulmonary and cerebral resuscitation, basic cardiac life support (BCLS), advanced

cardiac life support (ACLS)

Methods of pain relief

PAEDIATRIC

Infectious diseases

Poliomyelitis, measles, diphtheria, tetanus, childhood tuberculosis, typhoid fever, HIV

infection, dengue and chikungunya, viral haemorrhagic fevers and malaria. Pertussis,

mumps, rubella, influenza, H1N1, seasonal epidemics

Gastrointestinal tract and liver disorder

Diarrhoeal diseases, hepatitis and hepatic failure, cirrhosis liver and portal hypertension.

Helminthic infestations.

CVS - Congenital heart disease, rheumatic fever and RHD, CCF, hypertension, infective

endocarditis.

Respiratory system - Childhood asthma, acute bronchiolitis, pneumonias in children

suppurative lung disease, smoking and environmental pollution, Croup syndromes

CNS - Cerebral palsy, mental retardation, meningitis and encephalitis, seizure disorders

and febrile seizures, microcephaly and hydrocephalus, floppy infant, therapeutics

Treatment of epilepsy, GBS, ADEM

Haemopoietic system - anaemia in children, bleeding disorders

Disorders of kidney - acute nephritis, nephrotic syndrome, renal failure, urinary tract

infection

Endocrine disorder - diabetes mellitus, thyroid disorders, short stature and intersex,

ambiguous genitalia, precocious puberty

Connective tissue disorders - JRA, other vasculitis syndromes including SLE and HSP,

Kawasaki disease

Malignancies in children - leukemia, lymphomas, neuroblastoma, solid tumours, CNS

tumours, new born respiratory distress in newborn, perinatal diagnosis and treatment,

sepsis in newborn, assessment and management of asphyxia, thermoregulation in

newborn congenital malformations, disorders of gestation and low birth weight, neonatal

resuscitation, neonatal jaundice, sepsis, BFHI and feeding, normal variations intrauterine

infections, neonatal seizures

Behavioural problems in children - Enuresis, thumb sucking, breath holding, dyslexia,

specific learning disorders, child rearing problems like infantile colic, growing pain etc

Common poisoning and accidents in children - Kerosene, Dhatura, paracetamol and iron,

snake bite, burns etc.

Nutrition - BFHI, IYCF Nutritional assessment, SAM, specific vitamin deficiency

disorders

National programmes - IMNCI, RCH3, NRHM, Vitamin A, Iodine deficiency, IDSP,

ARI, ADD, AFP & PPI

Common chromosomal disorders and genetic counselling - Down's syndrome, Turner

syndrome.

Fragile X and Genetic counselling,

Innocent problems causing undue parental anxiety breath holding spell, evening colic,

growing pain etc.

OBSTETRICS AND GYNAECOLOGY

Pregnancy - Diagnosis, Clinical features, differential diagnosis, relevant tests and the

principles underlying the tests

Antenatal care: objectives of antenatal care routine antenatal check up, Assessment of

period of gestation, obstetric examination, general examination, other system examination

Clinical monitoring of maternal and fetal well being, detect abnormality

Common problems in Pregnancy - Oedema, Pruritis, heart burn, piles, varicose veins,

clothing and foot ware, exercise, sex, hygiene, nutrition, rest, drug in pregnancy

Drugs: Immunisation, drug prescription relevant blood examination, urine examination

and interpretation of the results and physiological changes in pregnancy

Ultrasound examination

Fetal surveillance

Normal Labour

Physiology of onset of labor, fetal skull and pelvis

Mechanism of labour

Labour monitoring partogram, Labour analgesia

Induction of labor (various methods of induction – merits and demerits)

Acceleration of labor and drugs used in labor

Delivery: stages of labour, management of first of labour

Management of second stage of labour (vaginal delivery with episiotomy)

Management of third stage of labor:

Active management of third stage of labor

Prevention of PPH, Management of PPH

Other complications of third stage of labor and management

Abnormal labor:

Hypertonic contractions, hypotonic contractions and incoordinate uterine action

CPD, obstructed labour

Caesarean section (indications, complications)

Vaginal delivery after caesarean

Abnormal presentations and management: Occipito posterior position, Breech

presentation, transverse lie, brow/face presentation

Abortions: Types, aetiopathology, investigations and management

Recurrent pregnancy loss: causes, investigations and management

Ectopic pregnancy: aetiopathology, early diagnosis, late diagnosis, clinical features,

differential diagnosis and principles of management (conservative, medical and surgical)

Trophoblastic diseases: aetiopathology, classification, clinical features, diagnosis,

management, long term follow up and complications

Hyperemesis gravidarum: definition, aetiopathology, clinical features advice and drug

therapy

Abnormal puerperium: cause clinical presentation investigations and management

Abnormal pregnancy:

Multiple pregnancies

Intrauterine death

PROM (Premature rupture of membranes)

Preterm labor

Post datism

IUGR

Elderly primi, grand multipara, Rh negative, Gynaecological disorders complicating

pregnancy

Fetus and newborn:

Fetal distress: definition, diagnosis and management neonatal resuscitation, care of

newborn, examination of newborn and identifying congenital abnormalities, jaundice in

newborn

Breast feeding

Contraception: various methods and devices, selection of patients, counselling of the

Couples, follow up, side effects, complications, and failure rates

Medical termination of pregnancy:

MTP Act, Legal and ethical aspects, methods, complications and management

Operative obstetrics

Indication and steps of the procedure of episiotomy

Vacuum extraction, forceps delivery

Instrumental evacuation

Caesarean section

Assisted breech delivery, breech extraction

External cephalic version, internal podalic version

Cervical encirclage extra amniotic instillation and manual removal of placenta

Ultrasound MRI in obstetrics: diagnostic and interventional

Fetomaternal medicine: Screening for congenital abnormalities, blood tests (maternal and

fetal) Amniotic fluid analysis, fetal tissue biopsy

Medical disorders in pregnancy:

Hypertensive disorders of pregnancy

Heart disease complicating pregnancy

Anaemia in pregnancy

Diabetes in pregnancy

UTI, hepatitis, TB, chest disease complicating pregnancy

Veneral disease, infections, HIV complicating pregnancy

Thyroid disorders, immunological disorders like SLE, ACLA, and thrombophilia complicating pregnancy

Jaundice in pregnancy Haemorrhage and coagulation disorders in obstetrics and

immunology in pregnancy

Dummy pelvis, Mannequins resuscitation of newborn

Gynaecology

Abnormal menstruation:

Normal menstrual cycle – physiology of menstruation

Abnormal menstruation – definition, classification, clinical features and principles of

investigations, diagnosis and management

Amenorrhoea: Definition, classification, causes, investigations and management

Dysfunctional uterine bleeding and postmenopausal bleeding: Definition, causes,

investigations and management

Hormonal therapy: when to give, when not to give, type of hormones with dosage,

duration of hormonal therapy, complications and contraindications for hormonal therapy

Infertility: Types, definition, causes, counselling, examination of couple and essential

investigations, ART: various methods of assisted reproductive techniques, setting up of

ART lab

Genital injuries including fistulae: Causes, diagnosis, clinical features, and principles of

management and prevention

Genital infections: STDs, PID, HIV infection and AIDS, genital TB - aetiopathology,

diagnosis and principles of management

Neoplasms of genital tract - Benign and malignant, aetiopathology, clinical feature,

diagnosis, principles of management and cancer screening and preventive aspects

Abnormal vaginal discharge: causes, clinical examination, diagnosis, investigation and

management. Counselling regarding prevention of STD's

Endometriosis: aetiopathology, classification, clinical features, diagnosis and management, contraception

Operative gynaecology: Indications, complications of D&C, cervical biopsy

Medical termination of pregnancy, evacuation of incomplete Abortion tubal ligation,

IUCD insertion

Abnormal hysterectomy

Vaginal hysterectomy, sling procedures

Ovarian tumours

Radical procedure for malignancy

Correction of enterocele, diagnosis and operation for vault prolapse

Endoscopy in gynaecological practice

Laprosopy: Principles, indications, instrumentation, procedure, complication, scope of

laprosopy in gynaecological practices

Hysteroscopy: Principles, indications, instrumentation, procedure, steps in present

gynaecological practices and complications.

Colposcopy: Principles instrument, procedure

Endocrinology

Post operative management:

Routine management of postoperative patient like IV fluids, drugs, antibiotics,

ambulation, nutrition

Management of fever, skin wound complications, complications like burst abdomen,

intraperitoneal bleeding and intra peritoneal collections, instruments, specimens etc.

Acute abdomen

Adolescent medicine (Gynaecology)

Analgesia

Urological problems

FAMILY WELFARE

Applied anatomy of mechanical methods for prevention of conception

In female - Barrier contraception, female condom, IUCD, tubectomy etc.

In male - Condom, vasectomy (NSV) etc

Physiology, endocrine and regulation of reproduction in the female. The safe periodrhythm

method of contraception, principle of use of oral contraceptives.

Pharmacology:

Mode of action and administration of chemical contraceptives and oral contraceptive

Contraindications for administration of contraceptives. Side effects of contraceptives

Community Medicine: The need for Family Welfare Planning, organization of Family

Planning service, Health Education in relating to Family Planning, Nutrition,

Physiological need of the mother, the child and the family Demography and the vital

statistics

Pediatrics: Problems of child health in relation to large family: organization of pediatric

services, nutritional problems of mother and child, childhood diseases due to over

crowding.

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper.