

ANNEXURE-III**SCHEME AND SYLLABUS FOR THE POST OF CIVIL ASSISTANT SURGEONS
(SPECIALISTS) IN HM & FW DEPARTMENT****Scheme of Examination**

Part-A:WRITTEN EXAMINATION (Objective Type)	No.of Questions	Duration (Minutes)	Maximum Marks
Paper-I: General Studies and General Abilities	150	150	150
Paper-II: Concerned Subject Section. A: Basic U.G.Syllabus (Common to All) (75 Questions) Section. B: Concerned P.G.Diploma/ P.G. Degree Syllabus for the post of C.A.S. General Medicine/General Surgery (75 Questions)	150	150	300
Part-B:Interview			50
		Total	500

Syllabus**PAPER-I: GENERAL STUDIES AND GENERAL ABILITIES**

1. Current Affairs: International, National and State.
2. Society, Heritage and Culture, Polity, Economy, Human Development Indices and the Development Programmes in India and Telangana.
3. Natural Resources in India and Telangana: their distribution, exploitation, conservation and related issues.
4. Basic concepts of Ecology and Environment and their impact on health and economy; Disasters and Disaster management.
5. Impact of changing demographic trends on health, environment and society.
6. Agriculture, Industry, Trade, Transportation and Service sectors in India and Telangana.
7. Food adulteration, Food processing, food distribution, food storage and their relevance to public health.
8. Recent trends in Science and Technology.
9. Telangana Statehood movement and formation of Telangana State.
10. Moral values and Professional ethics.
11. Logical Reasoning: Analytical Ability and Data Interpretation.

**PAPER-II: CONCERNED SUBJECT
(Consists of Section-A & Section-B)**

SECTION.A: MEDICAL SCIENCE AND GENERAL MEDICINE (COMMON TO ALL)

1. Anatomy

The subject deals with the structure of human body. The curriculum for subject is as follow:

- a. General Anatomy
- b. Regional Anatomy
 - i. Upper limb
 - ii. Lower limb
 - iii. Abdomen and Pelvis
 - iv. Thorax
 - v. Head & Neck
 - vi. Spinal Cord & Brain
- c. Micro-Anatomy
 - i. General Histology
 - ii. Systemic Histology
- d. Developmental Anatomy
 - i. General Embryology
 - ii. Systemic Embryology
- e. Genetics
- f. Radiological Anatomy, USG, CT, MRI
- g. Surface Anatomy, Living & Marking

2. Physiology

- a. General Physiology.
- b. Hematology
- c. Nerve
- d. Muscle
- e. Respiratory Physiology
- f. Cardiovascular Physiology
- g. Renal Physiology
- h. Body Temperature Regulation
- i. Alimentary System
- j. Nutrition
- k. Endocrine System
- l. Reproductive Physiology
- m. Special Senses: Eye, Ear, Taste, Smell
- n. Central Nervous System
- o. Bio Physics
- p. Environmental Physiology

3. Bio ChEMISTRY

- a. Molecular and functional organization of a cell and its sub-cellular components.
- b. Chemistry of enzymes and their clinical applications.
- c. Chemistry and metabolism of proteins and related disorders.
- d. Chemistry and metabolism of purines and pyrimidines and related disorders.
- e. Chemistry and functions of DNA and RNA, Genetic code; Protein bio synthesis & regulation (Lac-operon)
- f. The principles of genetic engineering and their applications in medicine.
- g. Chemistry and Metabolism of haemoglobin.
- h. Biological oxidation.
- i. Molecular concept of body defense and their applications in medicine.
- j. Vitamins and Nutrition.
- k. Chemistry and metabolism of carbohydrates and related disorders.
- l. Chemistry and metabolism of lipids and related disorders.
- m. Mineral metabolism: Water and electrolyte balance & imbalance.
- n. Acid base balance and imbalance.
- o. Integration of various aspects of metabolism and their regulatory pathways. Starvation metabolism.
- p. Mechanism of hormone action.

- q. Environmental biochemistry.
- r. Liver function tests, Kidney function tests, Thyroid function tests
- s. Detoxification mechanisms.
- t. Biochemical basis of cancer and carcinogenesis.
- u. Radioisotopes.
- v. Investigation techniques Colorimeter, Electrophoresis, Chromatography & Flame photometer.

4. Pathology

- a. General Pathology
- b. Haematology
- c. Systemic Pathology
- d. Clinical Pathology
- e. Autopsy

5. Microbiology

- a. General Microbiology
- b. Immunology
- c. Systemic Bacteriology
- d. Mycology
- e. Virology
- f. Parasitology

6. Pharmacology

- a. Introduction to Pharmacology
- b. General Pharmacology:
- c. Autonomic Pharmacology:
- d. Cardiovascular System Including Drugs Affecting Coagulation and Those Acting On Kidneys:
- e. Haematinics and Haematopoietic Factors:
- f. Neuropsychiatric Pharmacology Including Inflammation, Pain & Substance Abuse
- g. Chemotherapy Including Cancer Chemotherapy:
- h. Endocrinology:
- i. Agents Used In Gastrointestinal Disorders:
- j. Peri operative Management
- k. Rational Pharmacotherapy:
- l. Miscellaneous Topics:
Anti Allergies, Immuno modifying drugs, vaccines, Sera, Drugs acting on uterus, Drug interactions, Chelating Drugs, Drugs in extremes of age, Pregnancy, Drugs in organ disfunction, General anaesthetics, ocular and dermatological pharmacology.

7. Forensic Medicine and Medical Jurisprudence and Toxicology

- a. History of Forensic Medicine
- b. Need, Scope, Importance and probative value of Medical evidence in Crime Investigation
- c. Personal identity need and its importance.
- d. Mechanical Injuries And Burns
- e. Medico-Legal Aspects of Sex, Marriage And Infant Death
- f. Medico-Legal Aspects Of Death
- g. Medico-Legal Autopsy
- h. Forensic Psychiatry
- i. Poisons And Their Medico-Legal Aspects
- j. Forensic Science Laboratory
- k. Legal And Ethical Aspects Of Practice Of Medicine
- l. Definition Of Health And Items To Certify About Health
- m. Acts And Schemes Related To Medical Profession

8. Social and Preventive Medicine / Community Medicine

- a. Basic concept of Health and disease
- b. Principles of epidemiology and epidemiological methods
- c. Screening for diseases
- d. Epidemiology of Communicable diseases
- e. Epidemiology of chronic non-communicable diseases and conditions
- f. National Health Programmes of India
- g. Essential medicines and counterfeit medicines
- h. Demography and family planning

- i. Preventive medicine in obstetrics paediatrics and geriatrics
- j. Nutrition and health
- k. Medicine and social sciences
- l. Environment and health
- m. Hospital waste management
- n. Disaster management
- o. Occupational health
- p. Genetics and health
- q. Mental health
- r. Health information and basic medical statistics
- s. Communication for health education
- t. Health planning and management
- u. Health care of the community
- v. NGO's & International health

9. Medicine

- a. Principals of Medicine. Good medical practice, Therapeutics, Molecular & Genetic factors in disease, Immunological factors in disease, Environmental & nutritional factors in disease, Principles of Infectious diseases, Ageing & disease.
- b. Practice of Medicine.
- c. Critical Illness, Acute medical care, Emergencies & total management.
- d. Poisoning,
- e. Medical psychiatry,
- f. Oncology,
- g. Palliative care and pain,
- h. Infectious disease,
- i. HIV & AIDS,
- j. STD's,
- k. Clinical Biochemistry & Metabolism, & Lab reference ranges,
- l. Kidney & Urinary tract disease,
- m. Cardiovascular system,
- n. Respiratory diseases,
- o. Endocrine Diseases and Diabetes
- p. Alimentary Tract and Pancreatic Diseases
- q. Liver and Biliary Diseases
- r. Blood Diseases,
- s. Musculo Skeletal Diseases,
- t. Neurological diseases,
- u. Stroke,
- v. Skin diseases,
- w. Geriatrics.

10. Paediatrics

- a. Introduction of Paediatrics.
- b. Normal Growth and Normal Development and its disorders.
Adolescent health and Development
- c. Nutrition, Micro nutrients in health and diseases
- d. New born infant
- e. Immunization and Immuno deficiencies
- f. Infections and infestations
- g. Disorders of gastro intestinal system, liver and Fluid & Electrolyte disturbances
- h. Disorders of Respiratory system, Cardio vascular system, Kidney, Urinary tract, Endocrine, Metabolic, Rheumatological, Genetic and Neuro Muscular
- i. Central nervous system
- j. Inborn Errors of Metabolism
- k. Haematological disorders
- l. Childhood malignancies
- m. Poisonings, injuries and accidents
- n. Paediatric critical care
- o. National Health Programme for Child including Immunization Programmes

11. Psychiatry

- a. Nature and development of different aspects of normal human behaviour like learning memory, motivation, personality and intelligence.
- b. Recognition of differences between normal and abnormal behaviour,
- c. Classification of psychiatric disorders
- d. Organic psychosis,
- e. Functional psychosis,
- f. Schizo-phrenia,
- g. Affective disorders,
- h. Neurotic disorders,
- i. Personality disorders,
- j. Psycho-physiological disorders,
- k. Drug & Alcohol dependence,
- l. Psychiatric disorders of childhood and adolescence
- m. Use of different modes of Therapy in Psychiatric Disorders

12. Dermatology and Sexually Transmitted Diseases and Leprosy

- a. Common skin diseases etiology pathology clinical features complications investigations and complete management
- b. Common sexually transmitted diseases etiology pathology clinical features complications investigations and complete management National AIDS control programmes
- c. Leprosy etiology pathology clinical features investigations complications and complete management, National leprosy eradication programme
- d. Various modes of topical therapy, Commonly used drugs, their doses, side-effects/toxicity, indications and contraindications and interactions common dermatological medical and surgical procedures for various skin diseases and STD's

13. Tuberculosis and Respiratory Diseases

- a. Common chest diseases clinical manifestations, investigations, complications and complete management.
- b. Mode of action of commonly used drugs, their doses, side effects/ toxicity, indications and contra-indications and interactions, common medical and surgical procedures for various respiratory diseases and tuberculosis and National Tuberculosis Control Programmes.

14. Radiodiagnosis and Radiotherapy**Radiodiagnosis,**

- a. Basics of X-Ray production it's uses and hazards.
- b. Identification and diagnosis of changes in bones like fractures, infections, tumour and metabolic diseases.
- c. Identification and diagnosis of various radiological changes in diseases conditions of chest & mediastinum, skeletal system, GIT, Hepatobiliary system, and Genito-urinary system.
- d. Isotopes, Computerised Tomography(CT) Ultrasound, Magnetic Resonance Imaging(M.R.I.) and D.S.A.

Radiotherapy

- a. Symptoms and signs of various cancers, investigations and management.
- b. Basic principles of Radiotherapy and effect of radiation therapy on human beings
- c. Radio-active isotopes and their physical properties.
- d. Advances made in radiotherapy in cancer management
- e. Radiotherapeutic equipment.

15. Surgery**I. General Principles**

- a. Wound healing and management, management of severely injured. Metabolic response to injury
- b. Asepsis, antisepsis, sterilization.
- c. Surgical sutures.
- d. Acute, chronic Surgical infections and their management. Bites and stings.
- e. Hospital infection.
- f. AIDS and Hepatitis B; Occupational hazards and prevention.

- g. Mechanism and Management of missile, blast and gunshot injuries. Trauma and Disaster Management.
- h. Organ transplantation - Basic principles.
- i. Nutritional support to surgical patients.
- j. Diagnostic Imaging
- k. Resuscitation, Fluid electrolyte balance, Shock, Blood transfusion and Common postoperative complications.
- l. Anaesthesia and pain relief
- m. Day care surgery
- n. Principles of Laparoscopic and Robotic surgery
- o. Principles of Oncology
- p. Surgical Audit and Research.

II. Etiopathology Clinical Features and Management of :

- a. Common skin and subcutaneous conditions.
- b. Disorders of Arteries, Veins, Lymphatics and Lymph nodes
- c. Burns
- d. Disorders of Scalp, Skull and Brain
- e. Disorders of Oral cavity, jaws, salivary glands and neck.
- f. Disorders of Thyroid, Para Thyroid and Adrenal glands
- g. Diseases of Thorax, Heart, Pericardium and Breast
- h. Diseases of Oesophagus, Stomach, Duodenum, Liver, Spleen, Gall Bladder, Bile ducts, Pancreas, Peritoneum, Omentum, Mesentery and Retroperitoneal space.
- i. Diseases of Small Intestine, Large Intestine, Appendix, Rectum, Anal Canal.
- j. Acute Abdomen and Hernias.
- k. Diseases of Genito-Urinary system, Prostate, Seminal Vesicles, Urethra, Penis, Scrotum and Testis.

16. Orthopedics

Applied Anatomy, Etiopathogenesis, Clinical features and Management of:

- a. Bone injuries and dislocations
- b. Common infections of bones and joints,
- c. Congenital and skeletal anomalies,
- d. Common Degenerative and Metabolic Bone diseases in India,
- e. Neoplasms affecting Bones, joints and soft tissues.
- f. Sports injuries.

17. E.N.T.

- a. Anatomy and physiology of Ear, Nose, Throat
- b. Diseases of the Ear
- c. Diseases of the Nose and paranasal sinuses
- d. Diseases of the Oral Cavity and Salivary Glands
- e. Diseases of the pharynx
- f. Diseases of the Larynx and Trachea
- g. Diseases of the Oesophagus
- h. Deafness, Audiometry, Hearing Aids, and Rehabilitation

18. Ophthalmology

- a. Introduction Anatomy & Physiology of the Eye
- b. Ophthalmic Optics and Refraction
- c. Common Disease of Eye.
- d. Disorders of Ocular Motility
- e. Diseases of the Eye Adnexa
- f. Systemic Ophthalmology
- g. Principles of Management of Major Ophthalmic Emergencies
- h. Ophthalmic Pharmacology
- i. Community Ophthalmology and NPCB
- j. Nutritional Ophthalmology

19. Obstetrics and Gynaecology

- a. Anatomy, Physiology, Patho Physiology of Reproductive system, common conditions affecting it and its management.
- b. Normal pregnancy, Labour, Puerperium and the Management of concerned problems.
- c. Causes of maternal and perinatal morbidity and mortality

- d. Principles of contraceptions and various techniques, methods of Medical termination of pregnancy, sterilization and their complications.
- e. Use and abuse and side effects of drugs in pregnancy, pre-menopausal and post-menopausal periods.
- f. National programmes, maternal child health and family welfare and their implementation at various levels.
- g. Common Gynaecological diseases and principles of their management.
- h. Common obstetrical diseases and their medical and surgical management.

PAPER – II: CONCERNED SUBJECT

SECTION – B: OBESTETRICS AND GYNAECOLOGY (PG Diploma)

1. **Basic Sciences**
 - a) Normal and abnormal development, structure and function (Female & Male) urogenital system and female breast.
 - b) Applied anatomy of genitor-urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, upper thigh (inguinal ligament, inguinal canal, vulva, rectum and anal canal).
 - c) Physiology of Spermatogenesis
 - d) Endocrinology related to male and female reproduction (Neurotransmitters).
 - e) Anatomy and physiology of urinary and lower GI (Rectum/ Anal canal) tract.
 - f) Development, structure and function of placenta, umbilical cord and amniotic fluid.
 - g) Anatomical and physiological changes in female genital tract during pregnancy.
 - h) Anatomy of fetus, fetal growth and development, fetal physiology and fetal circulation.
 - i) Physiological and Neuro-endocrinal changes during puberty, adolescence, menstruation, ovulation, fertilization, climacteric and menopause.
 - j) Biochemical and endocrine changes during pregnancy, including systemic changes in cardiovascular, haematological, renal hepatic, and other systems.
 - k) Biophysical and biochemical changes in uterus and cervix during pregnancy and labour.
 - l) Pharmacology of identified drugs used during pregnancy, labour, post partum period in reference to their absorption, distribution, excretion, (hepatic) metabolism, transfer of the drugs across the placenta, effect of the drugs (used) on labour, on fetus, their excretion through breast milk.
 - m) Mechanism of action, excretion, metabolism of identified drugs used in the management of Gynaecological disorder.
 - n) Role of hormones in Obstetrics and Gynaecology.
 - o) Non Neoplastic and Neoplastic diseases.
 - p) Pathophysiology of ovaries, fallopian tubes uterus, cervix, vagina and external genitalia in healthy and diseased conditions.
 - q) Normal and abnormal pathology of placenta, umbilical cord, amniotic fluid and fetus.
 - r) Normal and abnormal microbiology of genital tract. Bacterial, viral and parasitical infections responsible for maternal, fetal and gynaecological disorders.
 - s) Humoral and cellular immunology in Obstetrics and Gynaecology.
 - t) Gametogenesis, fertilization, implantation and early development of embryo.
 - u) Normal pregnancy, physiological changes during pregnancy, labour and puerperium.
 - v) Immunology of pregnancy.
 - w) Lactation.
2. **Medical Genetics**
 - a) Basic medical genetics including cytogenetics
 - b) Pattern of inheritance
 - c) Chromosomal abnormalities – types, incidence, diagnosis, management and recurrence risk.
 - d) General principles of Teratology.
 - e) Screening, counselling and prevention of developmental abnormalities.
 - f) Birth defects – Genetics, teratology and counselling.
3. **Clinical Obstetrics**
 - a) **Antenatal Care:**
 - Prenatal care of normal pregnancy including examination, nutrition, immunization and follow up.
 - Identification and management of complications and complication of pregnancy – abortion, ectopic pregnancy, vesicular mole, Gestational Trophoblastic Diseases, hyperemesis gravidarum, multiple pregnancy, antepartum hemorrhage, pregnancy, induced hypertension, preeclampsia,

eclampsia, other associated hypertensive disorders, Anemia, Rh incompatibility, diabetes, heart disease, renal and hepatic diseases, preterm – post term pregnancies, intrauterine fetal growth retardation.

- Neurological, haematological, dermatological diseases, immunological disorders and other medical and surgical disorders/ problems associated with pregnancy, Multiple pregnancies, Hydramnios, Oligiamnios.
- Diagnosis of contracted pelvis (CPD) and its management
- High risk pregnancy-
 - ✓ Pregnancy associated with complications, medical and surgical problems.
 - ✓ Prolonged gestation.
 - ✓ Preterm labour, premature rupture of membranes.
 - ✓ Blood group incompatibilities.
 - ✓ Recurrent pregnancy wastage.
- Evaluation of fetal and maternal health in complicated pregnancy by making use of diagnostic modalities including modern ones (USG, Doppler, Electronic monitors) and plan for safe delivery for mother and fetus. Identifying fetus at risk and its management.
- Infections pregnancy. (Bacterial, viral, fungal, protozoal)
 - ✓ Malaria, Toxoplasmosis.
 - ✓ Viral – Rubella, CMV, Herpes, HIV, Hepatic viral infections (B,C etc)
 - ✓ Sexually transmitted infections. (STDs)
 - ✓ Mother to fetal transmission of infections.
- Identification and management of fetal malpositions and malpresentations.
- Management of pregnancies complicated by medical, surgical (with other specialities as required) and gynaecological diseases.
 - ✓ Anemia, haematological disorders
 - ✓ Respiratory, Heart, Renal, Liver, skin diseases
 - ✓ Gastro Intestinal, Hypertensive, Autoimmune, Endocrine disorders.
 - ✓ Associated surgical problems.

Acute abdomen (surgical emergencies – appendicitis & GI emergencies).

- Other associated surgical problems:
- Gynaecological disorders associate with pregnancy – congenital genital tract developmental anomalies, Gynae pathologies – Fibroid uterus, CaCx, genital prolapse etc.
- Prenatal diagnosis (of fatal problems and abnormalities), treatment – Fatal therapy
- M.T.P, P.N.D.T. Act.
- National Health MCH programmes, Social obstetrics and vital statis
- Recent advances in Obstetrics.

b) Intrapartum care:

- Normal labour – mechanism and management
- Partographic monitoring of labour progress, recognition of abnormal labour and its appropriate management.
- Identification and conduct of abnormal labour and complicated delivery – Breech, forceps delivery, caesarean section, destructive operations.
- Induction and augmentation of labour.
- Management of abnormal labour – Abnormal pelvis, soft tissue abnormalities of birth canal, mal-presentation, mal-positions of fetus, abnormal uterine action, obstructed labour and other distocias.
- Analgesia and anaesthesia in labour.
- Maternal and fetal monitoring in normal and abnormal labour (including electronic fetal monitoring).
- Identification and management of intrapartum complications, Cord presentation, complication of 3rd stage of labour – retained placenta, inversion of uterus, rupture of uterus, post partum hemorrhage.

c) **Post Partum**

- Complications of 3rd stage of labour – Retained placenta, inversion of uterus, post partum hemorrhage, rupture of uterus, Management of primary and secondary post partum hemorrhage, Retained placenta, uterine inversion, Post-partum collapse, amniotic fluid embolism.
- Identification and management of genital tract trauma – perineal tear, cervical/ vaginal tear, episiotomy complications, rupture uterus.
- Management of critically ill woman.
- Post partum shock, sepsis and psychosis.
- Post partum contraception
- Breast feeding practice, counselling and importance of breast feeding. Problems in breast feeding and their management, Baby friendly practices.
- Problems of newborn – at birth (resuscitation), management of early neonatal problems.
- Normal and abnormal puerperium – sepsis, thrombophlebitis, mastitis, psychosis.

Haematological problems in Obstetrics including coagulation disorders, use of blood and blood components/ products.

New Born

- Care of new born: Normal and high risk new born (including NICU care)
- Asphyxia and neonatal resuscitation
- Neonatal sepsis – prevention, detection and management.
- Neonatal hyper – bilirubinemia – investigation and management.
- Birth trauma – Detection and management
- Detection and management of fetal/ neonatal malformation.
- Management of common neonatal problems.

4. **Clinical Gynaecology**

- Epidemiology and etiopathogenesis of gynaecological disorders.
- Diagnostic modalities and management of common benign and malignant gynaecological diseases (diseases of genital tract):
 - ✓ Fibroid uterus
 - ✓ Endometriosis and adenomyosis
 - ✓ Endometrial hyperplasia
 - ✓ Genital prolapse (uterine & vaginal)
 - ✓ Cervical erosion, cervicitis, cervical polyps, cervical neoplasia.
 - ✓ Vaginal cysts, vaginal infections, vaginal neoplasia (VIN)
 - ✓ Benign Ovarian pathologies
 - ✓ Malignant genitals neoplasia – of Ovary, Fallopian tubes, Uterus, Cervix, Vagina, Vulva and Gestational Trophoblastic diseases, Ca Breast.
- Diagnosis and surgical management of clinical conditions related to congenital malformations of genital tract. Reconstructive surgery in gynaecology.
- Intersex, ambiguous sex and chromosomal abnormalities.
- Reproductive endocrinology: Evaluation of primary/ secondary Amenorrhea, management of Hyperprolactenemia, Hirsutism, Chronic anovulation, PCOD, thyroid and other endocrine dysfunctions.
- Infertility – Evaluation and management.
 - ✓ Methods of Ovulation induction
 - ✓ Tubal (Micro) surgery
 - ✓ Management of immunological factors of infertility
 - ✓ Male infertility
 - ✓ Obesity and other infertility problems
 - ✓ Advanced Assisted Reproductive Techniques (ART)

- Reproductive tract infections: prevention, diagnosis and treatment.
 - ✓ STD
 - ✓ HIV
 - ✓ Other infections
 - ✓ Genital Tuberculosis
- Principals of radiotherapy and chemotherapy in gynaecological malignancies. Choice, schedule of administration and complications of such therapies.
- Rational approach in diagnosis and management of endocrinal abnormalities such as menstrual abnormalities, amenorrhea (primary/secondary), dysfunctional uterine bleeding, polycystic ovarian disease, hyperprolactinemia (galactorrhea), hyperandrogenism, thyroid – pituitary – adrenal disorders, menopause and its treatment (HRT).
- Urological problems in Gynaecology – Diagnosis and management.
 - ✓ Urinary tract infection
 - ✓ Urogenital Fistulae
 - ✓ Incontinence
 - ✓ Other urological problems
- Orthopaedic problems in Gynaecology
- Menopause: management (HRT) and prevention of its complications.
- Endoscopy (Laparoscopy – Hysteroscopy)
 - ✓ Diagnostic and simple therapeutic procedures
 - ✓ Recent advances in gynaecology – Diagnostic and therapeutic
 - ✓ Paediatric, Adolescent and Geriatric Gynaecology
 - ✓ Advance operative procedures.

5. **Operative Gynaecology**

- Abdominal and vaginal hysterectomy
- Surgical procedures for genital prolapse, fibromyoma, endometriosis, ovarian, adenexal, uterine, cervical, vaginal and vulval pathologies.
- Surgical treatment for Urinary & other fistulae, Urinary incontinence.
- Operative endoscopy

6. **Family Welfare and Demography**

- Definition of demography and its importance in Obstetrics and Gynaecology.
- Statistics regarding maternal mortality, perinatal mortality/ morbidity, birth rate, fertility rate.
- Organisational and operational aspects of National Health Policies and Programmes in relation to population and family welfare including RCH.
- Various temporary and permanent methods of male and female contraceptive methods.
- Knowledge of in contraceptive techniques (including recent developments)
 - ✓ Temporary methods
 - ✓ Permanent methods
 - ✓ Recent advances in contraceptive technology
- Medical termination of pregnancy: Act, its implementation, providing safe and adequate services.
- Demography and population dynamics
- Contraception (fertility control)

7. **Male and Female Infertility**

- Causes and management of male infertility
- Indications, procedures of Assisted Reproductive Techniques in relation to male infertility problems.

PAPER – II: CONCERNED SUBJECT

SECTION – B: PEDIATRICS (PG Diploma)

1. Basic Sciences

Chromosomal disorders, single gene disorders, multifactorial disorders/polygenic, genetic diagnosis, and prenatal diagnosis. Embryogenesis of different organ system especially heart, genitourinary system, gastrointestinal tract, applied anatomy of different organs, functions of kidney, liver, lungs, heart and endocrinal glands, Physiology of micturition and defecation, placental physiology, fetal and neonatal circulation, regulation of temperature (exp. Newborn), blood pressure acid base balance, fluid electrolyte balance, calcium metabolism, vitamins and their functions, hematopoiesis, hemostasis, bilirubin metabolism, growth and development at different ages, puberty and its regulation nutrition, normal requirements of various nutrients, basic immunology bio-statistics, clinical epidemiology, ethical and medico-legal issues, teaching methodology and managerial skills, Pharmacokinetics of commonly used drugs, microbial agents and their epidemiology.

2. Neonatology and Community Paediatrics

- **Neonatology:** Normal newborn, low birth weight newborn, sick newborn. Perinatal care, normal newborn, care in the labour room and resuscitation, low birth weight, prematurity, newborn feeding, common transient phenomena, respiratory distress, apnea, infections, jaundice, anemia and bleeding disorders, neurologic disorders, gastrointestinal disorders, renal disorders, malformations, thermoregulation and its disorders, understanding of perinatal medicine. Maternal nutritional disorders: impact of fetal outcome, nutrition for the low birth weight, breast feeding including complementary feeding.
- **Community Paediatrics:** National health programmes related to child health, nutrition screening of community, prevention of blindness, school health programmes, prevention of sexually transmitted diseases, contraception, health legislation, child labour, adoption, disability and rehabilitation, rights of the child, national policy of child health and population, juvenile delinquency, Government and non-Government support services for children, investigation of adverse events following immunization in a community, general principles of prevention and control of infections including food borne, water, soil borne and vector borne diseases and investigation of an epidemic in a community.

3. General Paediatrics including advances in Paediatrics

- **Nutrition:** Protein malnutrition (underweight, wasting, stunting) vitamin and mineral deficiencies trace elements and micro nutrient deficiencies obesity. Adolescent nutrition, nutritional management in diarrhea, nutritional management of systematic illness (celiac disease hepatobiliary disorders, nephrotic syndrome), parental and enteral nutrition in neonates and children.
- **Growth and Development:** Principles of growth and development, normal growth and development in childhood and adolescence, deviations in growth and development, sexual maturation and its disturbances. Short stature, obesity, precocious and delayed puberty, developmental delay, impaired learning.
- **Infections:** Bacterial, viral, fungal, parasitic, rickettsial, Mycoplasma, *Pneumocystis carini* infections, Chlamydia, protozoal and parasitic tuberculosis, HIV, nosocomial infections. Control of epidemics and infection prevention.
- **Immunization and Infections diseases:** Bacterial, viral, fungal, parasitic, rickettsial, Mycoplasma, *Pneumocystis carini* infections, Chlamydia, protozoal and parasitic tuberculosis, HIV, nosocomial infections. Control of epidemics and infection prevention.

- **Behavioural and Psychological disorders:** Rumination, pica, enuresis, encopresis, sleep disorders, habit disorders, breath holding spells, anxiety disorders, mood disorders, temper tantrums, attention deficit hyperactivity disorder, infantile autism.
- **Skin diseases:** exanthematous illness vascular lesions, pigment disorders, vesicobullous disorders, infections; pyogenic and fungal and parasitic, Steven Johnson syndrome, eczema, soborrhea dermatitis, drug rash, urticaria, alopecia, infantile autism.
- **Eye problems:** Refraction and accommodation, partial/ total loss of vision cataract, night blindness, chorioretinitis, strabismus, conjunctival and corneal disorders, ROP, retinoblastoma, optic atrophy, papilloedema.
- **ENT:** Acute and chronic otitis media, conductive/ sensorineural hearing loss, diphtheria – tonsillar, nasal post-diphtheritic palatal palsy, acute/chronic tonsillitis/ adenoids, allergic rhinitis/ sinusitis.
- **Emergency and critical care:** Emergency are of shock, cardiorespiratory arrest, respiratory failure, congestive cardiac failure, acute renal failure, status epilepticus, fluid and electrolyte disturbances and its therapy, acid base disturbances, poisoning, accidents, scorpion and snake bites.
- Accident and Common Poisoning.

4. General Paediatrics including recent advances.

- **Neurology:** Limping child, convulsions, abnormality of gait, intracranial space occupying lesion, paraplegia, quadriplegia, large head, small head, floppy infant, acute flaccid paralysis, cerebral palsy and other neuromotor disability, headache.
- **Haematology and Oncology:** Deficiency anemia, haemolytic anemia, aplastic anemia/ pancytopenia, disorders of hemostasis, thrombocytopenia, blood component therapy, transfusion related infections, bone marrow transplant/ stem cell transplant, acute and chronic leukemia, myelodysplastic syndrome, Hodgkin's disease, non-Hodgkin's lymphoma, neuroblastoma, wilms tumor, hypercoagulable states.
- **GIT and Liver:** Acute, persistent and chronic diarrhea. Abdominal pain and distension, ascitis, vomiting, constipation, gastrointestinal bleeding, jaundice, hepato-splenomegaly and chronic liver disease, hepatic failure and encephalopathy.
- **Endocrinology:** Hypopituitarism/ hyperpituitarism, Diabetes insipidus, pubertal disorders, hypo and hyperthyroidism, hypo and hyperparathyroidism, adrenal insufficiency, Cushing's syndrome, adrenogenital syndromes, diabetes mellitus, short stature, failure to thrive, gonadal dysfunction and intersexuality, pubertal changes and gynaecological disorders.
- **Gastrointestinal and liver diseases:** Diseases of mouth, oral cavity and tongue, Disorders of deglutition and esophagus, peptic ulcer disease, *H.pylori* infection, foreign body, congenital pyloric stenosis, intestinal obstruction, malabsorption syndrome, acute and chronic diarrhea, irritable bowel syndrome, ulcerative colitis, Hirschsprung disease, anorectal malformations. Liver disorders: hepatitis, hepatic failure, chronic liver disease, Wilson's disease, Budd-Chiari syndrome, metabolic diseases of liver, cirrhosis, and portal hypertension.
- **Cardiovascular:** Murmur, cyanosis, congestive heart failure, systematic hypertension, arrhythmia, shock.
- **Respiratory:** Cough/ chronic cough, noisy breathing, wheezy child, respiratory distress, hemoptysis.
- **Miscellaneous:** Habit disorders, hyperactivity and attention deficit syndrome, arthralgia, arthritis, multiple congenital anomalies.

PAPER – II: CONCERNED SUBJECT

SECTION – B: ANAESTHESIOLOGY / ANAESTHESIA (PG DIPLOMA)

1. **Anatomy related to** – Diaphragm, upper and lower airway, regional anaesthesia, field block, central neuraxial blockade, block for acute pain states, intramuscular injections, arterial and venous cannulations and positioning.
2. **Physical related to**
 - a) Anaesthesia machine – assembly of necessary items.
 - b) Airway equipment including laryngoscopes, airway devices.
 - c) Breathing systems
 - d) Monitoring in anaesthesia with concepts of minimum monitoring
 - e) Gas laws, medical gas supply system
 - f) Fluidics
 - g) Electricity and diathermy
 - h) Oxygen therapy
3. **Physiology related to**
 - a) Theories of anaesthesia
 - b) Respiratory, cardiovascular, hepatobiliary, renal and endocrines system, pregnancy, blood, muscle & N-M Junction, ECG, regulation of temperature & metabolism, stress response, cerebral blood flow and ICP
 - c) Central, automatic and peripheral nervous systems
4. **Pharmacology related to**
 - a) General principles, concepts of pharmacokinetics and pharmacodynamics
 - b) Drug interactions in anaesthesiology
 - c) Drugs used for premedication, induction of anaesthesia, general anaesthetics-intra-venous and inhalational, neuromuscular block and reversal
5. Biochemistry relevant to fluid balance & blood transfusion, perioperative fluid therapy, acid base homeostasis in health and diseases.
6. Theoretical background of the commonly used anaesthetic techniques of general and regional anaesthesia, general principles of pre-anaesthetic assessment and medication, recovery from anaesthesia and post operative care, effects of positioning during anaesthesia.
7. Introduction to the operation theatre, post anaesthesia care rooms
8. Introduction to acute, chronic pain and pain management
9. Documentation and medico-legal aspects of anaesthesia. Concept of informed consent.
10. Resuscitation-basic and advanced life support (cardiac and trauma life support), neonatal resuscitation.
11. Intensive care of critical patients with introduction to artificial ventilation management of unconscious patients, oxygen therapy, shock-pathophysiology and management.
12. **Physics related to**
 - a) Equipment used in anaesthesia – monitors, ventilators, vaporizers, fibroptics.
 - b) Laser
 - c) Pacemaker and defibrillator
 - d) Non Invasive Monitoring equipment used for assessment of cardiac functions, temperature, respiratory functions, blood gases, depth of anaesthesia and neuromuscular block.
 - e) Sterilization of equipment
 - f) Computer in anaesthesia
13. Pharmacology of drugs used in cardiovascular, respiratory, endocrine, renal diseases and CNS disorders.
14. Interpretation of blood gases and other relevant biochemical values, various function tests and basics of measurement techniques, ECG
15. Special anaesthetic techniques as relevant to-
 - a) Outpatient anaesthesia, hypotensive anaesthesia, anaesthesia in abnormal environments including rural area and calamitous situations
 - b) Associated medial disorders in surgical patients.
16. Geriatric and paediatric anaesthesia

- 17.**Emergency, ENT, orthopaedic, ophthalmology, obstetrics, dental radio-diagnosis and radiotherapy
- 18.**Anaesthetic management of burns and plastic surgery,
- 19.**Patients with severe cardiac, respiratory, renal and hepatobiliary disorders posted for unrelated surgery
- 20.**Management of patients in shock, renal failure, critically ill and/ or on ventilator.
- 21.**Selection, maintenance and sterilization of anaesthesia and related equipment.
- 22.**Principles of human resources and material management
- 23.**General principles of medical audit.

PAPER – II: CONCERNED SUBJECT

SECTION – B: ORTHOPAEDICS (PG DIPLOMA)

- Metabolic Bone Diseases
- Bone Infection – pyogenic, tubercular and mycotic
 - Arthritis
 - Tubercular
 - Non-tubercular
 - Congenital Deformities
 - Developmental conditions
 - Diseases of joints and surgical treatments
 - Orthopaedic Neurology
 - Poliomyelitis, Cerebral palsy
 - Nerve injuries (Traumatic and non-traumatic)
 - Spina bifida and related disorders
 - Tumours of Bone – including secondary tumours of bone
 - Diseases of muscles
 - Fibrous diseases
 - Unclassified diseases of Bone
 - Paget's diseases
 - Tumours of Haemopoietic tissue
 - Histiocytic Lymphoma
 - Tumours invading bone from overlying structures
 - Peripheral vascular diseases
 - Bleeding disorders and orthopaedic manifestation, hemoglobinopathies and its orthopaedic manifestations.
 - Regional orthopaedic condition of adults and children
 - Spine
 - Cervicobrachial region
 - The shoulder
 - The elbow
 - The hand
 - The wrist
 - The hip
 - The knee
 - The foot and the ankle
 - The pelvis
 - Skin grafting and flaps
 - Trauma
 - Limb length inequality and its management
 - Microsurgical techniques in orthopaedics
 - Spinal cord injuries
 - Orthotics and prosthetics
 - AIDS related orthopaedic conditions
 - Theatre techniques and sterilization
 - Disaster relief
 - Advance trauma life support
 - Fractures:
 - Definitions, types, grades, patterns, complications
 - Pathology of fracture and fracture healing
 - Clinical and radiological feature healing
 - General principles of fracture treatment
 - Fractures of lower extremity
 - Fractures of hip and pelvis
 - Fractures of upper extremity and shoulder girdle
 - Fracture and dislocation in children
 - Malunited fractures
 - Delayed union and non-union of fractures
 - Fractures, dislocations and fracture dislocations of spine
 - Dislocation and subluxation
 - Acute dislocations

- Old unreduced dislocations
- Recurrent dislocations
- Traumatic disorders of joints
- Ankle injuries
- Knee injuries
- Shoulder and elbow injuries
- Wrist and hand injuries
- Arthrodesis:
 - Arthrodesis of lower extremity and hip
 - Arthrodesis of upper extremity
 - Arthrodesis of spine
- Bone grafts and bone substitute (bone banking)
- Arthroplasty:
 - Biomechanics of joints and joint replacement
 - Hip
 - Knee
 - Ankle
 - Shoulder
 - Elbow
- Arthroscopy
 - General principles of Arthroscopy
 - Arthroscopy of knee and ankle
 - Arthroscopy of shoulder and elbow
- Amputations and disarticulation.

PAPER – II: CONCERNED SUBJECT

SECTION – B: OTO- RHINO-LARYGOLOGY (ENT) (PG DIPLOMA)

- Anatomy and Physiology of Ear, Nose & Throat, Trachea and esophagus.
- The ears and nasal sinuses in the aerospace environment
- Physiological consideration of pressure effect on the ear and sinuses in deep water diving
- The generation and reception of speech
- Radiographic anatomy of the ear, nose throat and imaging.
- Bacteriology in relation to Otorhinolaryngology
- Allergy and rhinitis
- The principles of cancer immunology with particular reference to head and neck cancer
- Principles of chemotherapy in head and neck cancer
- Haematology in relation to Otolaryngology
- Anaesthesia for Otolaryngology
- Pharmacology of drugs used in ENT
- Electrolyte, fluid balance/ shock conditions
- Use of teaching aids
- Routine blood, urine testing
- Preparation of slides
- Facial nerve stimulation test
- Audiometric tests like pure tone Audiometry, Beckesy's Audiometry, Impedance Audiometry, Free field Audiometry, Specialized tests of hearing including SISI, Tone decay, ABLB, Speech discrimination score etc.
- Vestibular tests like caloric testing (Water & Air) stopping test, Fukuda's test, cranio corpography recording of nystagmus by ENG and its interpretation.
- Evoked response audiometry.

Ear

- The physical and functional examination of the ear
- The functional and physical examination of the vestibular system
- Tinnitus
- Affections of external ear
- Repair of deformities of the external ear.
- Congenital conditions of the middle ear cleft
- Traumatic conductive deafness
- Acute inflammation of the middle ear cleft
- Non-suppurative otitis media
- Chronic suppurative otitis media
- Management of chronic suppurative otitis media
- Complications of infections of middle ear.
- Tumors of the middle ear cleft and temporal bone
- Diseases of the otic capsule-otosclerosis
- Diseases of the otic capsule-other diseases
- The deaf child
- Traumatic lesions of the inner ear
- Inflammatory lesions of the vestibular and auditory nerve
- Acoustic neuroma
- Ototoxicity
- Presbycusis
- Vascular lesions of the inner ear
- Diagnosis and management of sudden and fluctuant sensorineural hearing loss
- Meniere's disease
- Neurologic aspects of vertigo
- Facial paralysis
- Rehabilitation of adults with acquired Hearing loss---hearing aids
- The cochlear implants
- Nystagmus and Electronystagmography

- Skull base/ Neurologic surgery

Nose

- Examination of the nose
- Conditions of the external nose
- Injuries of the facial skeleton
- Cosmetic surgery of the nose
- Congenital diseases of nose
- The nasal septum
- Foreign bodies in the nose, rhinolith
- Epistaxis
- Acute chronic inflammations of the nasal cavities
- Vasomotor rhinitis-allergic and non-allergic
- Nasal polyposis
- Abnormalities of smell
- Acute sinusitis
- Chronic sinusitis
- Nasal Allergy/ Fungal allergic sinusitis
- Complications of acute and chronic sinusitis
- Non healing granuloma of the nose
- Tumors of the nose and sinuses
- Facial pains
- Trans-ethmoidal hypophysectomy
- Surgery of the pterygo palatine fossa
- FESS/ LASER Surgery

Throat

- Methods of examination of the mouth and pharynx
- Diseases of the mouth
- Diseases of the salivary glands
- Pharyngeal lesions associated with general diseases
- Diseases of the tonsils and adenoids (excluding neoplasms)
- Tumors of the pharynx
- Hypopharyngeal diverticulum (Pharyngeal Pouch)
- Oesophageal conditions in the practice of ear, nose and throat surgery
- Methods of examining the larynx and tracheobronchial tree
- Congenital diseases of the larynx
- Laryngeal disorders in singers and other voice users
- Neurological affections of larynx and pharynx
- Disorders of speech
- Intubation of the larynx, laryngotomy and tracheostomy
- Cervical node dissection
- Skin grafts in Otolaryngology
- Lower respiratory conditions in Otolaryngology
- Micro laryngeal surgery/ thyroplasty

Miscellaneous (Hear and Neck)

a)

- Functional Anatomy of cerebellum and brainstem
- Cranial nerves
- Raised intracranial tension-causes, diagnosis, management with particular reference to otitis hydrocephalus
- Head injuries and I.C. Haemorrhage
- Pituitary gland, anatomy, physiology hypo and hyper pituitarism, new growths.
- Intracranial venous sinuses and their affections.

b)

- Osteology: Skull, mandible cervical and thoracic vertebral sternum
- Cervical fascia, facial spaces in neck, retro pharyngeal and parapharyngeal Abscesses
- Anatomy and physiology of thyroid gland, goitre, diseases of the thyroid and carcinoma of thyroid

- Anatomy of mediastinum, large blood vessels in neck, thoracic duct development of major cervical blood vessels.
- Pleura, plural cavity, bronchopulmonary segments and their clinical importance.
- Facial plastic surgery
- Head and neck reconstructive surgery

General

- Physiology of circulation, regulation of blood pressure, reactions of body to haemorrhage, pathophysiology of shock, fluid balance, blood transfusion and its hazards, fluid replacement therapy, burns.

Drugs used in the ENT

- Antihistaminic
- Nasal vaso constrictors
- Local anaesthetics
- Cortico steroids
- Cyto-toxic agents
- Antibiotics
- Radioactive isotopes
- Antifungal agents

PAPER – II: CONCERNED SUBJECT

SECTION – B: DERMATOLOGY, VENREOLOGY & LEPROSY (PG DIPLOMA)

Topics Related to Allied Basic Sciences

- The structure, function and development of human skin
- Ultra structural aspects of epidermis, epidermal appendages, dermo-epidermal junction, dermis, and sub-cutis
- Immunology, molecular biology and genetics in relation to the skin.
- Epidermal cell kinetics and keratinization.
- Lipids of epidermis and sebaceous glands.
- Percutaneous absorption
- Skin as an organ of protection and thermoregulation
- Biology of eccrine and apocrine sweat glands
- Biology of melanocytes and melanin formation
- Biology of hair follicles, sebaceous glands and nails
- Epidermal proteins
- Dermal connective tissue : collagen, elastin, reticulin, basement membrane and ground substance
- Metabolism of carbohydrates, proteins, fats and steroids by the skin.
- Cutaneous vasculature and vascular reactions.
- Mechanism of cutaneous wound healing
- Cellular and molecular biology of cutaneous inflammation and arachadonic acid metabolism.
- Immunologic aspects of epidermis
- HLA system
- Immunoglobulins
- Cytokines and chemokines
- Lymphocytes, neutrophils, eosinophils, basophils, and mast cells
- Complement system
- Hypersensitivity and allergy
- Cutaneous carcinogenesis (chemical, viral & radiation)
- Basics of cutaneous bacteriology, mycology, virology, parasitology and host resistance.
- Common laboratory procedures, stains and culture media etc. related to the cutaneous diagnosis.
- Basic pathologic patterns and reactions of skin.
- Common laboratory stains and procedures used in the hisopathologic diagnosis of skin diseases and special techniques such as immunofluorescence, immunoperoxidase and other related techniques.

Clinical Dermatology

- Epidemiology of cutaneous disease
- Psychologic aspects of skin disease and psycho-cutaneous disorders.
- Pathophysiology and clinical aspects of pruritus.

Papulosquamous Diseases

- Psoriasis, Pityriasis rubra pilaris, pityriasis rosea.
- Parapsoriasis, Lichen Planus, Lichen nitidus.
- Palmo-plantar keratodermas, Darier's disease, Porokeratosis.
- Ichthyoses and ichthyosiform dermatose.

Vesiculo-Bullous Disorders

- Kyrle's disease and other perforating disorders.
- Erythema multiforme, Stevens-Johnson syndrome, Toxic epidermal necrolysis
- Bullous pemphigoid, Pemphigus
- Chronic bullous disease of childhood
- Herpes gestationis (pemphigoid gestationis)
- Hereditary epidermolysis bullosa
- Epidermolysis bullosa acquisita
- Dermatitis herpetiformis
- Familial benign pemphigus

- Subcorneal pustular dermatoses
- Pustular eruptions of palms and soles

Disorders of Epidermal Appendages and Related Disorders

- Disorders of hair and nails
- Disorders of sebaceous glands
- Rosacea, perioral dermatitis, Acne
- Disorders of eccrine and apocrine sweat glands
- Follicular syndromes with inflammation and atrophy

Epidermal and Appendageal Tumours

- Precancerous lesions, squamous cell carcinoma and Basal cell carcinoma
- Keratoacanthoma, Benign epithelial tumours, Appendageal tumours
- Merkel cell carcinoma, Paget's disease

Disorders of Melanocytes

- Disorders of pigmentation, Albinism, Benign neoplasia and hyperplasias of melanocytes, Dysplastic melanocytic nevi, cutaneous malignant melanoma.

Inflammatory and Neoplastic Disorders of The Dermis

- Acute Febrile Neutrophils dermatosis (Sweet's syndrome)
- Erythema Elevatum Diutinum
- Cutaneous Eosinophilic Diseases
- Granuloma Faciale
- Pyoderma Grangrenosum
- Erythema Annulare Centrifugum and other Figurate Erythemas
- Granuloma Annulare
- Malignant Atrophic Papulosis (Deigo's Disease)
- Neoplasms, Pseudo Neoplasms and Hyperplasias of the Dermis.
- Vascular Anomalies
- Kaposi's Sarcoma
- Anetoderma and other Atrophic Disorders of the skin
- Ainhum and pseudoainhum
- Neoplasias and hyperplasias of Neural and Muscular origin
- Elastosis Perforans Serpiginosa and Reactive Perforating Collagenosis

Lymphomas, Pseudolymphomas and Related Conditions

Disorders of Subcutaneous Tissue

- Panniculitis
- Lipodystrophy
- Neoplasms of the subcutaneous Fat

Disorders of the Muccocutaneous Integument

- Biology and Disorders of the oral Mucosa
- Disorders of the Anogenitalia of Males and Females

Cutaneous Changes in Disorders of Altered Reactivity

- Genetic Immunodeficiency Disease
- Urticaria and Angioedema
- Disorders associated with Complement Abnormalities
- Graft-versus-Host Disease
- Muco-cutaneous Manifestations in immunosuppressed host other than HIV-infection
- Contact Dermatitis
- Auto Sensitization Dermatitis
- Atopic Dermatitis (Atopic Eczema)
- Nummular Eczematous Dermatitis
- Seborrhoeic Dermatitis
- Vesicular Palmoplantar Eczema

Skin Changes Due to Mechanical and Physical Factors

- Occupational skin disease
- Radiobiology of the skin
- Skin problems in Amputee
- Sports Dermatology
- Skin problems in War field
- Decubitus Ulcers

Photomedicine, Photo Biology and Photo Immunology in Relation to Skin

- Acute and chronic Effects of Ultraviolet Radiation and sun light on the skin.

Disorders Due to Drugs and Chemical Agents

- Cutaneous reaction to Drugs
- Muccocutaneous Complications of Antineoplastic Therapy
- Cutaneous Manifestations of Drug Abuse

Dermatology and the Ages of Man

- Neonatal Dermatological problems
- Pediatric and Adolescent Dermatological problems
- Ageing of skin
- Geriatric Dermatological problems

Skin Lesions in Nutritional Metabolic and Heritable Disorders

- Cutaneous changes in Nutritional Disease
- Acrodermatitis Enteropathica and other zinc deficiency disorders
- Cutaneous changes in Errors of Amino Acid Metabolism: Tyrosinemia II, Phenylketonuria, Argininesuccinic Aciduria, and Alkaptonuria,
- Amyloidosis of the skin
- The porphyries
- Xanthomatosis and Lipoprotein Disorders
- Fobry's Disease; Galactosidase – A deficiency (Angiokeratoma Corporis Diffusum Universale)
- Lipid Proteinosis
- Cutaneous mineralization and ossification
- Heritable Disorders of Connective Tissue with skin changes
- Heritable diseases with increased Sensitivity to Cellular injury
- Basal Cell Naevus Syndrome

Skin Manifestations of Hematologic Disorders

- Skin changes in hematological Disease
- Langerhans Cell and other cutaneous histiocytoses
- The Mastocytosis Syndrome

Skin Manifestations of Systemic Disease

- The skin and disorders of the Alimentary Tract
- The Hepatobiliary system and the skin
- Cutaneous changes in renal disorders, cardiovascular, pulmonary disorders and endocrinal disorders
- Skin changes and diseases in pregnancy
- Skin changes in the Flushing Disorders and the Carcinoid syndrome

Skin Manifestations of Rheumatologic Disease

- Lupus erythematosus
- Dermatomyositis
- Scleroderma
- Systemic Necrotizing Arteritis
- Cutaneous Necrotising venulitis
- Cryoglobulinemia and Cryofibrinogenemia
- Relapsing Polychondritis
- Rheumatoid Arthritis, Rheumatic Fever and Gout
- Sjogren's syndrome
- Raynaud's phenomenon
- Reiter's syndrome
- Multicentric Reticulohistiocytosis

Cutaneous Manifestations of Disease in Other Organ Systems

- Sarcoidosis of the skin
- Cutaneous Manifestations of Internal Malignancy
- Acanthosis Nigricans
- Scleredema
- Popular Mucinosis
- Neurocutaneous Disease

- Tuberos Sclerosis Complex
- The Neurofibromatosis
- Ataxia Telangiectasia
- Behcet's Disease

Bacterial Diseases with Cutaneous Involvement

- General Considerations of Bacterial Diseases
- Pyodermas : Staphylococcus aureus, Streptococcus, and others
- Staphylococcal Scalded – Skin syndrome
- Soft Tissue Infections : Erysipelas, Cellulitis, and Gangrenous Cellulitis
- Gram. Negative Coccal and Bacillary Infections
- Bartonellosis
- Miscellaneous Bacterial Infections with Cutaneous Manifestations
- Tuberculosis and other mycobacterial infections
- Actinomycosis, Nocardiosis, and Actinomycetoma
- Lyme disease and Borreliosis
- Kawasaki Disease

Fungal Diseases with Cutaneous Involvement

- Superficial Fungal Infection: Dermatophytosis, Tinea Nigra, Piedra
- Yeast Infections: Candidiasis, Pitryiasis (Tinea) Versicolor
- Deep Fungal Infections

Viral and Rickettsial Disease

- Viral Diseases : General Consideration
- Rubella (German Measles)
- Measles
- Hand Foot and Mouth Disease
- Herpangina
- Erythema Infectiosum and Parvovirus B 19 infection
- Herpes simplex
- Varicella and Herpes Zoster
- Cytomegalovirus Infection
- Epstein – Barr Virus Infections
- Human Herpes virus 6 & 7 infections and Exanthem subitum (Roseola Infantum or Sixth Disease)
- Smallpox and Complications of small pox vaccination
- Contagious Pustular Dermatitis, Contagious Ecthyma: Orf virus infection
- Molluscum Contagiosum
- Milker's Nodules
- Warts
- Human Retroviral Disease : Human T-Lymphotropic Viruses.

PAPER – II: CONCERNED SUBJECT

SECTION – B: PATHOLOGY (PG DIPLOMA)

- General Pathology including Immunopathology
- Systematic Pathology
- Hematology
- Blood Banking including Transfusion medicine
- Cytopathology
- Laboratory organisation including quality Control
- Basic Microbiology & Clinical biochemistry

General

- Principles of sample collection for Hematology and Clinical Pathology
- Histopathology and cytology specimens, urine analysis, stool examination
- Pregnancy tests, semen analysis, microbiological and biochemical tests
- Waste disposal and universal precautions

Cytology

- Fine needle aspiration cytology – Staining & interpretation
- Cytology of body fluids – Staining and interpretation

Histopathology

- Histopathology techniques including section cutting
- Haemotoxylin and Eosin stain and special stains which include PAS stain, Alcian blue stain, Reticulin stain, Masson's Trichrome and Perl's stain
- Principles of immunohistochemistry and immunofluorescence

Hematology

- Anticoagulants
- Preparation of Lesihman's stained and reagents for blood counts
- Hands on experience in different methods of Haemoglobin estimation RBC, WBC, Platelets and Reticulocyte counts, AEC, PCV, ESR and absolute indices and Coagulation tests
- Preparation and interpretation of Peripheral smear and Bone Marrow
- Haemolytic workup including sickle cell preparation, Hb F & electrophoresis etc.
- Cytochemistry – Peroxidase/ sudan black B, PAS, LAP, NSE and Perl's stain
- Quality control and use of automated cell counters
- Cleaning of Glass ware

Blood Bank

- Blood grouping and typing
- Cross matching
- Coomb's test
- Donor screening and blood collection
- Testing for STS, HIV, Hepatitis B & C
- Rh antibody titration
- Cold agglutinin titre
- Quality control

Microbiology

- a) Grams stain
 - b) Z.N.Stain
 - c) Hanging drop
 - d) KoH/ Lactophenol preparation for fungi
1. Sterilization techniques, culture methods, identification and reporting.
 2. Widal, VDRL, HIV, HBV, CRP, RF, ASO.

Clinical Biochemistry

Basic Biochemistry applied to biochemical investigations:

Photocolorimeter, Spectrophotometer, pH-Meter, Flame photometer, Semi Autoanalyser and Autoanalyser Electrophoresis, blood sugar, urea, creatinine, proteins, bilirubin, SGOT, SGPT, Alkaline Phosphatase etc.

PAPER – II: CONCERNED SUBJECT**SECTION – B: GENERAL MEDICINE (PG)****I. Medicine**

- a. Principles of Medicine. Good medical practice, Therapeutics, Molecular & Genetic factors in disease, Immunological factors in disease, Environmental & nutritional factors in disease, Principles of Infectious diseases, Ageing & disease.
 - b. Practice of Medicine.
 - c. Critical Illness, Acute medical care, Emergencies & total management.
 - d. Poisoning,
 - e. Medical psychiatry,
 - f. Oncology,
 - g. Palliative care and pain,
 - h. Infectious disease,
 - i. HIV & AIDS,
 - j. STD's,
 - k. Clinical Biochemistry & Metabolism, & Lab reference ranges,
 - l. Kidney & Urinary tract disease,
 - m. Cardiovascular system,
 - n. Respiratory diseases,
 - o. Endocrine Diseases and Diabetes
 - p. Alimentary Tract and Pancreatic Diseases
 - q. Liver and Biliary Diseases
 - r. Blood Diseases,
 - s. Musculo Skeletal Diseases,
 - t. Neurological diseases,
 - u. Stroke,
 - v. Skin diseases,
 - w. Geriatrics.
- II.**
- a. Metabolic Diseases
 - b. Environmental disorders
 - c. National Health Programmes
 - d. Recent Advances
 - e. Other Misc. disorders
 - f. Medical Ethics or legal liabilities (CPA).

PAPER – II: CONCERNED SUBJECT

SECTION – B: DPM (PSYCHIATRIC) (PG DIPLOMA)

Theoretical Concepts

- a. Abuse (Physical / Sexual) Or Neglect of Child / Adult
- b. Adjustment Disorder
- c. Anxiety Disorders (Including Panic Disorder, Agoraphobia, Phobias, Obsessive-Compulsive Disorder, Posttraumatic Stress Disorder, Acute Stress Disorder, Generalized Anxiety Disorder, etc.)
- d. Case- Presentations (Including History Taking, Neurological Examination, Mental Status Examination etc.,)
- e. Child Psychiatry (Including Learning Disorders, Motor Skills Disorder, Communication, Disorders, Pervasive Developmental Disorders (Autistic Disorder, Rett's Disorder, Childhood Disintegrative, Disorder, Asperger's Disorder), Attention – Deficit / Hyperactivity Disorder, Conduct Disorder, Oppositional Defiant Disorder, Pica, Tic Disorders, Elimination Disorders, Separation Anxiety Disorder, Selective Mutism, Reactive Attachment Disorder of Infancy Or Early Child hood, Stereotypic Movement Disorder, etc.,)
- f. Classification In Psychiatry
- g. Community Psychiatry
- h. Consultation – Liaison Psychiatry
- i. Culture Bound Syndromes
- j. Dissociative Disorders (Including Dissociative Amnesia, Dissociative Fugue, Dissociative Identity Disorder, Depersonalization Disorder, etc.,)
- k. Eating Disorders (Including Anorexia Nervosa, Bulimia Nervosa, etc.,)
- l. Electro- Convulsive Therapy
- m. Electrophysiology (Including Chronobiology, Electroencephalogram, etc.,)
- n. Emergencies In Psychiatry
- o. Emotional Intelligence
- p. Epidemiology
- q. Ethics In Psychiatry
- r. Factitious Disorders
- s. Forensic and Legal Psychiatry (Including Indian Lunacy Act, Mental Health Act, Persons with Disability Act, Narcotic and Psychotropic Substance Act)
- t. History Of Psychiatry
- u. Impulse – Control Disorders (Including Intermittent Explosive Disorder, Kleptomania, Pyromania, Pathological Gambling Trichotillomania, etc.,)
- v. Learning- Theories
- w. Memory
- x. Mental Health Issues In Women
- y. Mind Retardation
- z. Mind – the evolving concepts
- aa. Miscellaneous: Noncompliance, Malingering, Antisocial Behavior, Borderline Intellectual Functioning, Age-Related Cognitive Decline, Bereavement (Including Death,) Academic Problems, Occupational Problems, Identity Problems, Religious Or Spiritual Problems, Acculturation Problems, Phase Of Life Problems, Chronic Fatigue Syndrome, etc.,)
- bb. Mood Disorders (Including Depressive Disorders, Bipolar Disorders, Cyclothymic Disorder, etc.)
- cc. Movement Disorders (Including Medication- Induced Movement Disorders, etc.)
- dd. Neuroanatomy
- ee. Neuroimaging
- ff. Neuropathology
- gg. Neurophysiology
- hh. Neuropsychology (Including Psychological Features Of Cerebral Disorders, Clinical Assessment etc.)
- ii. Organic Psychiatry (Including Amnestic Disorders, Catatonic Disorder, Cerebrovascular Disorders, Delirium, Dementia, Endocrine, Epilepsy, Head Injury, Headache, HIV – Aids, Infections, etc.)
- jj. Personality Disorders

- kk. Placebo Effect
- ll. Pre-Menstrual Dysphoric Disorder
- mm. Post – Partum Psychiatric Disorders
- nn. Psychodynamics
- oo. Psychology (General)
- pp. Psychometry / Psychodiagnostics
- qq. Psychopharmacology
- rr. Psychosis (Including Schizophrenia, Schizophreniform Disorder, Schizoaffective Disorder, Delusional Disorder, Brief Psychotic Disorder, Shared Psychotic Disorder, etc.)
- ss. Psychosomatic Disorders
- tt. Psychosurgery
- uu. Psychotherapy
- vv. Sexual And Gender Identity Disorders (Including Sexual Desire Disorders, Sexual Arousal Disorders, Orgasmic Disorders, Sexual Pain Disorders, Vaginismus, Paraphilias, etc.)
- ww. Sleep Disorders (Including Insomnia, Narcolepsy, Breathing – Related Sleep Disorders, Circadian Rhythm Sleep Disorders, Parasomnias, Nightmare Disorder, Sleep Terror Disorder, Sleepwalking Disorder, etc.)
- xx. Somatoform Disorders (Including somatization Disorder, Undifferentiated Somatoform Disorder, Conversion Disorder, Pain Disorder, Hypochondriasis Body Dysmorphic Disorder, etc.)
- yy. Statistics / Research Methodology
- zz. Stress
- aaa. Stupor
- bbb. Substance Related Disorders (Including Alcohol- Related Disorders, Amphetamine – Related Disorders, Caffeine- Related Disorders, Cannabis-Related Disorders, Cocaine- Related Disorders, Hallucinogen- Related Disorders, Inhalant-Related Disorders, Nicotine-Related Disorders, Opioid - Related Disorders, PhencyclidineRelated Disorders, Sedative, Hypnotic, or Anxiolytic Related Disorders, etc.)
- ccc. Suicide
- ddd. Transcultural Psychiatry

PAPER – II: CONCERNED SUBJECT

SECTION – B: RADIO-DIGNOSIS/RADIOLOGY (PG DIPLOMA)

A. Physics Apparatus, Photography and Film Faults

1. Introduction of general properties of radiation and matter. Fundamentals of nuclear physics and radioactivity.
2. Production of x-rays.
3. X-ray Generating Apparatus
4. Interaction of x-rays and gamma rays with matter and their effects on irradiated materials.
5. Measurement of X and gamma rays.
6. Interaction of x-ray with the patient
7. The Radiological Image
8. The Image Receptor
9. Contrast Enhancement
10. Radiation hazards and protection
11. Quality Assurance
12. Fundamentals of electromagnetic radiation
13. Characteristic properties of X-rays
14. X-rays equipments
 - a) Conventional equipments
 - b) Fluoroscopy – Conventional and Imaging Intensifier
 - c) Advanced equipments - US, CT, MRI, Doppler, Angiography, Cine Fluoroscopy and Cine Angiography.
15. Quantity Assurance & evaluation of performance of X-rays equipments.
16. Contrast Media – types, chemical composition, mechanism of action, dose schedule, route of administration, adverse reaction and their management.
17. Nuclear Medicine: Equipments and isotopes in various organ systems and recent advances in the field of nuclear medicine.
18. Picture archiving and communication system (PACS) and Radiology information system (RIS) to make a film less department, Telemedicine, Digital Imaging..
19. Recent advances in radiology and imaging.

B. Anatomy

Gross and cross sectional Anatomy of all the body systems.

C. Pathology

Gross morphology of pathological condition of systemic diseases.

D. Radiology - Course Contents

1. Bones and joints
2. Respiratory system
3. Cardiovascular system
4. Gastro intestinal tract
5. Urogenital tract
6. C.N.S. including spine
7. Radiology of obstetrics and Gynecology
8. ENT, EYES, Teeth, Soft tissue & breast
9. Endocrine glands
10. Clinically applied radionuclide imaging
11. Contrast Agents, Contrast Media, their types, formulations, mechanisms of action, dose schedule, routes of administration, adverse reactions and their management.

PAPER – II: CONCERNED SUBJECT

SECTION – B: GENERAL SURGERY (PG)

Surgery

I. General Principles

- a. Wound healing and management, management of severely injured. Metabolic response to injury
- b. Asepsis, antisepsis, sterilization.
- c. Surgical sutures.
- d. Acute, chronic Surgical infections and their management. Bites and stings.
- e. Hospital infection.
- f. AIDS and Hepatitis B; Occupational hazards and prevention.
- g. Mechanism and Management of missile, blast and gunshot injuries. Trauma and Disaster Management.
- h. Organ transplantation - Basic principles.
- i. Nutritional support to surgical patients.
- j. Diagnostic Imaging
- k. Resuscitation, Fluid electrolyte balance, Shock, Blood transfusion and Common postoperative complications.
- l. Anaesthesia and pain relief
- m. Day care surgery
- n. Principles of Laparoscopic and Robotic surgery
- o. Principles of Oncology
- p. Surgical Audit and Research.

II. Etiopathology Clinical Features and Management of :

- a. Common skin and subcutaneous conditions.
- b. Disorders of Arteries, Veins, Lymphatics and Lymph nodes
- c. Burns
- d. Disorders of Scalp, Skull and Brain
- e. Disorders of Oral cavity, jaws, salivary glands and neck.
- f. Disorders of Thyroid, Para Thyroid and Adrenal glands
- g. Diseases of Thorax, Heart, Pericardium and Breast
- h. Diseases of Oesophagus, Stomach, Duodenum, Liver, Spleen, Gall Bladder, Bile ducts, Pancreas, Peritoneum, Omentum, Mesentery and Retroperitoneal space.
- i. Diseases of Small Intestine, Large Intestine, Appendix, Rectum, Anal Canal.
- j. Acute Abdomen and Hernias.
- k. Diseases of Genito-Urinary system, Prostate, Seminal Vesicles, Urethra, Penis, Scrotum and Testis.

III.

- a. History of medicine with special reference to ancient Indian texts.
- b. Health economics – basic term, health insurance.
- c. Medical Sociology, doctor-patient relationship, family adjustments in disease, organisational behaviour, conflict resolution.
- d. Computers – record keeping, computer aided learning, virtual reality, robotics.
- e. Environment protection – Bio-medical waste management.
- f. Concept of essential drugs and rational use of drugs.
- g. Procurement of stores and material management.
- h. Research methodology – library consultation, formulating research, selection of topic, writing protocol thesis, ethics.
- i. Bio-medical statistics, clinical trials.
- j. Medical ethics
- k. Consumer protection
- l. Newer antibiotics
Problem of resistance
- m. O.T. design, technologies, equipment.
- n. Advance in imaging technologies.
- o. Critical care in surgical practice
- p. Blood Transfusion
- q. Brain death
- r. Cadaveric organ retrieval