

সূচিপত্র:

| ক্র: নং | বিষয়ের নাম           | পৃষ্ঠা নং |
|---------|-----------------------|-----------|
| ১.      | বাংলা                 | ২         |
| ২.      | English               | ৩-৪       |
| ৩.      | বাংলাদেশ বিষয়াবলি    | ৫         |
| ৪.      | আন্তর্জাতিক বিষয়াবলি | ৬         |
| ৫.      | গাণিতিক যুক্তি        | ৭         |
| ৬.      | মানসিক দক্ষতা         | ৮         |
| ৭.      | Medical science       | ৯-২১      |
| ৮.      | Dental science        | ২২-৩০     |

বিষয়ের নাম: বাংলা  
পূর্ণমান : ২০

ভাষা :

প্রয়োগ-অপপ্রয়োগ, বানান ও বাক্য শুদ্ধি, পরিভাষা, সমার্থক ও বিপরীতার্থক শব্দ, ধ্বনি, বর্ণ, শব্দ, পদ, বাক্য, প্রত্যয়, সন্ধি ও সমাস

মান বন্টন

১৫

সাহিত্য :

ক. প্রাচীন ও মধ্যযুগ  
খ. আধুনিক যুগ (১৮০০-বর্তমান পর্যন্ত)

০৫

**Name of the Subject: English**

**Total Marks: 20**

**Marks  
Distribution**  
15

**PART- I : Language**

**A. Parts of Speech:**

The Noun:

The Determiner

The Gender

The Number

The Pronoun

The Verb:

The Finite: transitive, intransitive

The Non-finite: participles, infinitives, gerund

The Linking Verb

The Phrasal Verb

Modals

The Adjective

The Adverb

The Preposition

The Conjunction

**B. Idioms & Phrases:**

Meanings of Phrases

Kinds of Phrases

Identifying Phrases

**C. Clauses:**

The Principal Clause

The Subordinate Clause:

The Noun Clause

The Adjective Clause

The Adverbial Clause & its types

**D. Corrections:**

The Tense

The Verb

The Preposition

The Determiner

The Gender

The Number

Subject-Verb Agreement

**E. Sentences & Transformations:**

The Simple Sentence  
The Compound Sentence  
The Complex Sentence  
The Active Voice  
The Passive Voice  
The Positive Degree  
The Comparative Degree  
The Superlative Degree

**F. Words:**

Meanings  
Synonyms  
Antonyms  
Spellings  
Usage of words as various parts of speech  
Formation of new words by adding prefixes and suffixes

**G. Composition:**

Names of parts of paragraphs/letters/applications

**PART- II: Literature**

05

**H. English Literature:**

Names of writers of literary pieces from Elizabethan period to the 21<sup>st</sup> Century.

Important drama, Poetry and prose of different ages.

বিষয়ের নাম: বাংলাদেশ বিষয়াবলি

পূর্ণমান : ২০

মান বন্টন

১. বাংলাদেশের জাতীয় বিষয়াবলি :

০৪

বাংলাদেশের আর্থসামাজিক ও রাজনৈতিক ইতিহাস: আধুনিক যুগ (১৭৫৭ থেকে অদ্যবধি)

২. বাংলাদেশের কৃষিজ সম্পদ :

০২

শস্য উৎপাদন এবং এর বহুমুখীকরণ, খাদ্য উৎপাদন ও ব্যবস্থাপনা।

৩. বাংলাদেশের জনসংখ্যা, জনশুমারি, জাতি, গোষ্ঠী ও ক্ষুদ্র নৃগোষ্ঠী সংক্রান্ত বিষয়াদি।

০২

৪. বাংলাদেশের অর্থনীতি :

০২

উন্নয়ন পরিকল্পনা প্রেক্ষিত, জাতীয় আয়-ব্যয়, রাজনীতি ও বার্ষিক উন্নয়ন কর্মসূচি, দারিদ্র্য বিমোচন ইত্যাদি।

৫. বাংলাদেশের শিল্প ও বাণিজ্য :

০২

শিল্প উৎপাদন, পণ্য আমদানি ও রপ্তানিকরণ, গার্মেন্টস শিল্প ও এর সার্বিক ব্যবস্থাপনা, অন্যান্য শিল্পসমূহ, বৈদেশিক লেন-দেন, অর্থ প্রেরণ, ব্যাংক ও বীমা ব্যবস্থাপনা ইত্যাদি।

৬. বাংলাদেশের সংবিধান :

০২

প্রস্তাবনা ও বৈশিষ্ট্য, মৌলিক অধিকারসহ রাষ্ট্র পরিচালনার মূলনীতিসমূহ, সংবিধানের সংশোধনীসমূহ।

৭. বাংলাদেশের রাজনৈতিক ব্যবস্থা :

০২

রাজনৈতিক দলসমূহের গঠন, ভূমিকা ও কার্যক্রম, ক্ষমতাসীন ও বিরোধী দলের পারস্পরিক সম্পর্কাদি, সুশীল সমাজ ও চাপ সৃষ্টিকারী গোষ্ঠীসমূহ এবং এদের ভূমিকা। জুলাই-আগস্ট গণঅভ্যুত্থান ২০২৪ পরবর্তী এবং সংস্কার প্রস্তাবনা।

৮. বাংলাদেশের সরকার ব্যবস্থা :

০২

আইন, শাসন ও বিচার বিভাগসমূহ, আইন প্রণয়ন, নীতি নির্ধারণ, জাতীয় ও স্থানীয় পর্যায়ে প্রশাসনিক ব্যবস্থাপনা কাঠামো, প্রশাসনিক পুনর্বিন্যাস ও সংস্কার।

৯. বাংলাদেশের জাতীয় অর্জন, বিশিষ্ট ব্যক্তিত্ব, গুরুত্বপূর্ণ প্রতিষ্ঠানসমূহ, জাতীয় পুরস্কার, বাংলাদেশের খেলাধুলাসহ চলচ্চিত্র, গণমাধ্যম-সংশ্লিষ্ট বিষয়াদি।

০২

বিষয়ের নাম: আন্তর্জাতিক বিষয়াবলি  
পূর্ণমান : ২০

|                                                                                                                         | মান বন্টন |
|-------------------------------------------------------------------------------------------------------------------------|-----------|
| ১. বৈশ্বিক ইতিহাস, আঞ্চলিক ও আন্তর্জাতিক ব্যবস্থা, ডু-রাজনীতি।                                                          | ০৪        |
| ২. আন্তর্জাতিক নিরাপত্তা ও আন্তরাষ্ট্রীয় ক্ষমতা সম্পর্ক।                                                               | ০৪        |
| ৩. বিশ্বের সাম্প্রতিক ও চলমান ঘটনাপ্রবাহ।                                                                               | ০৪        |
| ৪. আন্তর্জাতিক পরিবেশগত ইস্যু ও কূটনীতি।                                                                                | ০৩        |
| ৫. আন্তর্জাতিক সংগঠনসমূহ এবং বৈশ্বিক অর্থনৈতিক প্রতিষ্ঠানাদি।                                                           | ০৩        |
| ৬. সিভিল সার্ভিসের গোড়াপত্তন এবং যুক্তরাজ্য, যুক্তরাষ্ট্র, চীন, জাপান, ভারত, নেপাল, শ্রীলংকা ও পাকিস্তান সিভিল সার্ভিস | ০২        |

বিষয়ের নাম: গাণিতিক যুক্তি

পূর্ণমান : ১০

|                                                                                                                                 | মান বন্টন |
|---------------------------------------------------------------------------------------------------------------------------------|-----------|
| ১. বাস্তব সংখ্যা, ল.সা.গু, গ.সা.গু, শতকরা, সরল ও যৌগিক মুনাফা, অনুপাত ও সমানুপাত, লাভ ও ক্ষতি।                                  | ০২        |
| ২. বীজগাণিতিক সূত্রাবলি, বহুপদী উৎপাদক, সরল ও দ্বিপদী সমীকরণ, সরল ও দ্বিপদী অসমতা, সরল সহসমীকরণ।                                | ০২        |
| ৩. সূচক ও লগারিদম, সমান্তর ও গুণোত্তর অনুক্রম ও ধারা।                                                                           | ০২        |
| ৪. রেখা, কোণ, ত্রিভুজ ও চতুর্ভুজ সংক্রান্ত উপপাদ্য, পিথাগোরাসের উপপাদ্য, বৃত্ত সংক্রান্ত উপপাদ্য, পরিমিতি-সরলক্ষেত্র ও ঘনবস্তু। | ০২        |
| ৫. সেট, বিন্যাস ও সমাবেশ, পরিসংখ্যান ও সম্ভাব্যতা।                                                                              | ০২        |

**বিষয়ের নাম: মানসিক দক্ষতা**  
**(MENTAL ABILITY)**

**পূর্ণমান : ১০**

১. ভাষাগত যৌক্তিক বিচার (Verbal Reasoning)
২. সমস্যা সমাধান (Problem Solving)
৩. বানান ও ভাষা (Spelling and Language)
৪. যান্ত্রিক দক্ষতা (Mechanical Reasoning)
৫. স্থানাঙ্ক সম্পর্ক (Space Relation)
৬. সংখ্যাগত ক্ষমতা (Numerical Ability)

**Name of the Subject: MEDICAL SCIENCE**  
Total Marks-100

Part-I  
(Pre and Para clinical)  
Marks-50

**Anatomy**

12

- a. Anatomy of cells.
- b. Cell divisions.
- c. Elementary genetics.
- d. Tissues of the body:
  - i. Epithelial tissue
  - ii. Connective tissue proper
  - iii. The skeletal system functions of the bones, Ligaments cartilages, structures of the bones and joints
  - iv. The muscular tissues.
- e. The nervous system-structures of the nervous tissue-neuron and neuroglia; Central nervous system; Peripheral nervous system and autonomic nervous system.
- f. The sense organs.
- g. Dermatomes.
- h. The skin.
- i. The circulatory system-Heart, arteries, Veins.
- j. The Respiratory system-Nose, Throat, Larynx, Trachea, Bronchi and Lungs.
- k. Digestive system-Mouth, Pharynx, Esophagus, Stomach, Intertwines, Salivary glands, Liver, Gall bladder, Pancreas and Spleen.
- l. Urinary system-Kidneys Ureters, Urinary bladder, Urethra.
- m. The reproductive system Male and Female reproductive system.
- n. The endocrine glands.
- o. General embryology.
- p. Special embryology of the human body.

**Physiology**

8

- a. Physiology of basic tissues.
- b. Blood and circulatory system.
  - i. Hemostasis
  - ii. Coagulation of blood
  - iii. Cardiac Cycle
  - iv. E.C.G.
  - v. Blood pressure
  - vi. Cardiac output
  - vii. Physiology of shock
  - viii. Regional circulation.
- c. Respiratory system:
  - i. Lung function tests
  - ii. Mechanism of rhythmic breathing
  - iii. O<sub>2</sub> and CO<sub>2</sub> carriage
  - iv. Regulation of respiration
  - v. Cyanosis and hypoxia.
- d. Digestion, Metabolism and Nutrition
- e. Kidney body fluid:
  - i. Mechanism of urine formation and concentration.
  - ii. Renal circulation
  - iii. Renal function tests
  - iv. Regulation of body fluids.
- f. Endocrinology and reproduction:
  - i. Hypothalamus
  - ii. Thyroid
  - iii. Parathyroid
  - iv. Pancreas
  - v. Adrenal gland
  - vi. Ovary and testis
  - vii. Reproduction and control of fertility in the male and female.
- g. Nervous system:
  - i. General organization of nervous system
  - ii. Reflexes
  - iii. Cerebellum
  - iv. Hypothalamus
  - v. Emotion.
- h. Special senses:
  - i. Visual pathway
  - ii. Light reflex
  - iii. Accommodation reaction
  - iv. Vestibular apparatus
  - v. Pathway for test and audition.

**Bio-chemistry:**

5

1. Biophysics and Biomolecules (solutions, cryetalloid, colloid, isotopes, carbohydrates, Lipids, Amino acids and Protein, Enzymes, coenzymes, cofactor, isoenzymes)
2. Food, Nutrition, Vitamins and Minerals
3. Digestion, Absorption, Bioenergetics and Metabolism
4. Body fluid, electrolytes and acid-base balance
5. Clinical bio-chemistry and endocrinology
6. Fundamentals of Molecular Biology and genetics

**Pharmacology :**

5

1. Formulation, absorbtion, distribution, biotransformation, elimination and adverse effects of drug
2. Mechanism of action of drug (pharmaco-dynamics)
3. Half life, steady state concentration of drug
4. Indication, contraindication, adverse effect of common drugs.
5. Rational use of drug

**Forensic Medicine & Toxicology:**

5

1. Ethical medical practice and doctor-patient relationship.
2. Deposition in the court of law as a medical expert.
3. Collect, preserve and dispatch the medico-legally important specimen.
4. Prepare, dispatch and store the proper medical records.
5. Examination of victim/assailant of physical assault and sexual assault.
6. Medico-legal examination (impotency, age determination, sex determination, mental fitness, mental state).
7. Medico-legal autopsy and interpret the findings.
8. Certificates and medico-legal reports according to the law of the land.
9. Referral or discharge certificate and death certificate properly and authentically as per ICD-10.
10. Supervise and guide the medical team/practitioner regarding the ethical and legal consequence related to medical issues.
11. Handling dead body ethically and morally.
12. Record the dying declaration.

**Community Medicine and Public Health:**

5

1. Concept of public health, community Medicine, Health and Disease
2. Behavioral science
3. Health communication and Health Education.
4. Environment and Health
5. Immunity and Immunization including EPI
6. Principles of Epidemiology, Epidemiology of communicable and non communicable disease
7. MCH-FP and Demography
8. Primary Health care(PHC), MDG, SDG

**Pathology:**

5

- a. Cell biology general concept.
- b. Inflammation, Degeneration, Necrosis and gangrene.
- c. Sterilization and disinfection.
- d. Disorder of growth: Tumors including cancers.
- e. Radiation, Hazards and prevention.
- f. Immunity, Immunization against common bacterial and viral infection. Immuno deficiency syndrome with special reference to AIDS.
- g. Common cause of diarrhea and pathogenesis and complication. General reaction to trauma. Hemorrhage and shock.
- h. Bacterial infections with special references to Enteric fever, Tuberculosis, Leprosy, Diphtheria, Whooping cough, Tetanus, Gas gangrene, Food poisoning, Strepto and staphylococcal infections, Bacillary dysentery, Cholera.
- i. Common viral disease like poliomyelitis, Chickens pox, Measles, Viral hepatitis, Rabies, Herpeszoster, Dengue, COVID-19.
- j. Common parasitic disease Ascariasis, Ankylostomiasis (Hook worm infection).
- k. Common protozoal disease Malaria, Kala-Azar, Giardiasis.
- l. Sexually transmitted disease like, Gonorrhoea, Syphilis, Nongonococcal urethritis.
- m. Routine laboratory procedure for Peripheral blood film, Urine, Stool, Malarial parasite. Sputum for Gram stains and AFB examination. Blood examination for Hb% and ESR.
- n. Special pathaology for some disease like-
  - Tuberculosis, Pneumonia, Bronchial Carcinoma, Chronic Bronchitis, Bronchiectasis, Pleurisy, Plural effusions.
  - Liver disease like viral hepatitis, Hepatic amoebiasis, Liver abscess, primary and secondary carcinoma of liver
  - Collagen diseases like systemic lupus erythromatosus, Systemic sclerosis, Dermatomyositis, Rheumatoid arthritis.
  - Joint disease: Gout, spondylitis, Psoriatic arthritis, Osteo-arthritis, Seronegetive arthritis.
  - Endocrine disease: Pituitary tumors, Acromegaly, Thyroid tumors, Hyperthyroidism, Hypothyroidism
  - GI tract: Peptic ulcer disease, Carcinoma Stomach & colon.
  - Renal disease: Acute and chronic glomerulonephritis, Acute and Chronic pyelonephritis. Polycystic disease of Kidney, Renal artery stenosis, Renal failure.

**Microbiology:**

5

1. General Bacteriology
2. Immunology
3. Molecular Biology
4. Mycology
5. Virology
6. Systemic Bacteriology
7. Clinical Microbiology

**MEDICAL SCIENCE**

Part-II

(Clinical)

Marks: 50

**Medicine:**

17

1. Diseases due to infections:

- Approach to infectious diseases-diagnostic and therapeutic principles.
- General principles and rational use of antibiotics.
- Dengue.
- Enteric fever.
- Amoebiasis, Giardiasis.
- Kala-azar.
- Malaria.
- Filariasis.
- Rabies.
- Tuberculosis.
- HIV/AIDS.
- Leprosy.
- Cholera, Diarrheal Disease.

2. **Approach to common symptoms of disease** : Fever, Pain, Palpitation, Jaundice, Anaemia, Bleeding, Haemoptysis, Dyspnoea, Paralysis, Syncope, Ascitis, Oedema, Cough, Vomiting, Dysuria.

3. **Nutritional, Metabolic and Environmental diseases** : Protein energy malnutrition, Obesity, Diseases due to Vitamin deficiency and excess.

4. Helminthic diseases :

- Nematodes
- Trematodes

5. Diseases of the cardiovascular system :

- Ischaemic heart disease.
- Rheumatic fever and Rheumatic heart disease.
- Valvular diseases of heart.
- Infective endocarditis.
- Hypertension and hypertensive heart diseases.
- Cardiac arrhythmias (common).
- Heart failure-Acute-chronic
- Acute and chronic pericarditis, pericardial effusion & cardiac tamponade.

6. **Diseases of the gastrointestinal tract** :

- Peptic Ulcer disease and non-ulcer dyspepsia.
- Malabsorption syndrome.
- Irritable bowel syndrome and inflammatory bowel disease.
- Acute viral hepatitis and chronic hepatitis.
- Abdominal tuberculosis.

**7. Nephrology & Urinary System :**

- Nephritic & Nephrotic Illness.
- UTI/Pyelonephritis.
- ARF
- CRF

**8. Neurological System :**

- Cerebrovascular diseases.
- Meningitis : viral, bacterial and tuberculosis.
- Encephalitis, viral.
- Peripheral neuropathy.

**9. Water and electrolytes and acid-base homeostasis :**

- Diagnosis and treatment of specific fluid and electrolytic disorders.

**10. Endocrine and Metabolic diseases :**

- Diabetes mellitus.
- Thyrotoxicosis.
- Hypothyroidism and Iodine deficiency state.
- Cushing's syndrome and Addisons disease.

**11. Connective tissue Disorder :**

- Rheumatoid arthritis and reactive arthritis.
- Degenerative joint diseases including cervical spondylosis.
- Gout.

Geriatric medicine :

Common Genetic Disorders :

Common Immunologic disorders :

**12. Diseases of the blood :**

- Anaemia : iron deficiency.
- Common Haemolytic anaemia (Thalassemia and acquired haemolytic anaemia ).
- Common bleeding disorders (Thrombocytopenia and haemophilia).
- Agranulocytosis and aplastic anaemia.
- Leukaemas : Acute and chronic.
- Lymphomas.
- Multiple myelomas
- Blood transfusion.

**12. Diseases of the respiratory system :**

- Upper respiratory tract infections.
- Pneumonias.
- Tuberculosis.
- Lung abscess and bronchiectasis.
- Diseases of the pleura : Pleurisy, Pleural effusion & empyema. Pneumothorax.

- Chronic Obstructive lung diseases and cor pulmonale.
  - Bronchial asthma & Pulmonary eosinophilia.
  - Acute and chronic respiratory failure.
  - Neoplasm of the lung.
14. **Pancreatic disease** : Acute pancreatitis, Chronic pancreatitis.
  15. **Liver and Biliary tract disease** : Viral hepatitis, Chronic liver disease, Cirrhosis of liver, Carcinoma liver, Liver abscess.
  16. **Geriatric medicine** : General principles of treating elderly, Health problem of the elderly.
  17. **Sexually transmitted disease** : Gonorrhoea, Syphilis, Non Gonococcal urethritis.
  18. **Skin disease** : Scabies, Superficial fungal infection, Dermatitis, Psoriasis, Drug reaction etc.
  19. **Medical Psychiatry** : Anxiety neurosis, Depression, Dissociative disorder. Somatoform disorder etc.
  20. **Communication skill.**
  21. **Terminal Care.**

**Surgery :**

17

1. History, evolution and scope of surgery
2. Assess and prepare patient for surgery
3. Trauma
4. Management of wounds
5. Diagnosis and management of surgical infections
6. Diagnosis and treatment shock and hemorrhage
7. Hernia and its management
8. Different types of burn and its management
9. Fluid and electrolytes imbalance and management
10. Management of skin tumour and cysts
11. Appropriate measures to prevent hospital infection
12. Understand and comply with ethical principles and clinical practice
13. Management of
  - a) Common surgical diseases of alimentary system
  - b) Acute retention of urine
  - c) Acute epididymo orclitis
  - d) Torsion testis
  - e) Paraphimosis/Phimosis
  - f) Cholecystitis/Cholelithiasis
  - g) Pancreatitis
  - h) Obstructive daundice
  - i) Breast abscess/Breast lump
  - j) Thyroid swelling
  - k) DVT
  - l) Head injury
  - m) Osteomyelitis
  - n) Gastric outlet abstraction
  - o) Sub-acute intestinal abstraction
  - p) Common malignancies
  - q) Epistaxis
  - r) Acute abdomen
14. Operative surgery
  - a) Primary and delayed primary and secondary suture closure of wounds
  - b) Circumcision
  - c) Vasectomy
  - d) Venesection
  - e) Hydrocele operation
  - f) Dressing of surgical wounds

**Obstetrics and Gynaecology:**

16

**Core contents of Obstetrics :**

Conception and development of fetoplacental unit

- (a) Fertilisation, implantation, fetoplacental unit, placental barrier
- (b) Placenta, amniotic fluid and umbilical cord: Development, structure and function

Anatomical and physiological changes during pregnancy

Diagnosis of pregnancy

Counselling in reproductive health

Antenatal care

- (a) Counselling
- (b) Objectives, principles of antenatal care, identification of high risk pregnancy
- (c) Nutrition during pregnancy and lactation
- (d) Vomiting in early pregnancy

**Normal labour**

- (a) Criteria of normal labour
- (b) Stages, mechanism of normal labour
- (c) Diagnosis of labour
- (d) Management of normal labour
- (e) Assessment of progress of labour
- (f) Monitoring maternal and fetal condition
- (g) Partograph
- (h) Pain relief

**Normal puerperium**

- (a) Anatomical and physiological changes during puerperium
- (b) Management of normal puerperium
- (c) Post partum family planning
- (d) IYCF- Breast feeding & Complementary feeding

**Hypertensive disorder in pregnancy including pre-eclampsia and eclampsia Medical disorders in obstetrics**

- (a) Anaemia in pregnancy
- (b) Urinary problems in obstetrics
- (c) Diabetes
- (d) Heart disease
- (e) Hepatitis

**Ante-partum haemorrhage**

Definitions, classification, clinical features, complications and management

Rh incompatibility

Blood transfusion in Obstetrics

Multiple pregnancy

Definitions and types, clinical features, complications, diagnosis and principles of management

**Malposition and malpresentation**

Types, causes, diagnosis, complications and management

**Abnormalities of labour**

(a) Prolonged labour : Definition, aetiology, diagnosis, complications, management

(b) Obstructed labour : Definition, aetiology, diagnosis, complications, management

Post-partum haemorrhage (PPH)

Definitions, causes (atonic, traumatic and others) of PPH, prevention and management, follow up.

**Abnormal puerperium**

Causes, diagnosis and management

**The newborn**

Resuscitation, examination and care of the newborn

**Neonatal problems**

Birth Asphyxia

Jaundice

Infection

Feeding

Other problems of newborn

IYCF-Breast feeding & Complementary feeding

**IUGR & IUB**

Causes, diagnosis and management

**Obstetric operative procedures**

Episiotomy, caesarean section, vacuum and forceps deliveries, version, destructive operations : their indications and complications

Steps of operation : Episiotomy, vacuum & forcep delivery.

**Vital statistics :**

Maternal morbidity & mortality

Perinatal morbidity and mortality

Neonatal morbidity & mortality

Diagnostic aids in obstetrics

(a) Ultrasonography

- Basics of ultrasound
- Role in obstetrics

(b) Fetal monitoring-CTG

(c) Amniocentesis and other prenatal diagnostic techniques

### **Social Obstetrics**

- (a) Maternal & perinatal morbidities and mortalities
- (b) Direct causes of maternal & perinatal morbidity and mortality- Contributing socio-economic & environment factors
- (c) Importance of family planning in prevention of obstetric problem
- (d) Strategies for promotion of maternal health & prevention of illness emphasizing maternal nutrition, hygiene & medical care
- (e) National programs for MCH&FP, EOC, Combined service delivery

### **Core contents of Gynaecology**

#### **Anatomy of the female reproductive organs**

- (a) Basic anatomy of uterus, ovaries, tubes, vagina and vulva
- (b) Relationship of uterus, ovaries, tubes and vagina to other pelvic organs
- (c) Developmental anomaly of genital organs

#### **Physiology of reproduction**

- (a) Puberty and its complication, menstruation, ovulation
- (b) Fertilisation and implantation

#### **Bleeding in early pregnancy**

- Abortion:  
Definition, types, causes and management of all types of abortion and this complication.
- Ectopic Pregnancy :  
Definition, aetiopathology, clinical feature, differential diagnosis and abdomen of acute principles of surgical management
- Trophoblastic tumours:
  - (i) **Hydatidiform mole** : types, clinical features, complications, differential diagnosis, management and follow up.
  - (ii) Choriocarcinoma : diagnosis and management, follow up

#### **Vaginal discharge**

Physiological and pathological, Diagnosis and treatment.

#### **Menstrual disorder**

- (a) Amenorrhoea :  
Types, causes and principles of management
- (b) Menorrhagia :  
Definition, causes and management
- (c) Metrorrhagia :  
Definition, causes and management
- (d) Dysmenorrhoea : Definition types, causes and management
- (e) Abnormal uterine bleeding  
Definition, PALM-COIN classification, diagnosis, principles of investigation and management

**Genital tract infection**

- (a) Defensive mechanism of genital tract
- (b) Pelvic inflammatory diseases : acute and chronic
- (c) Sexually transmitted diseases
- (d) Genital tuberculosis

**Urinary incontinence-definition, types**

- (a) Genitourinary fistula :-  
Types, causes, clinical features, principles of management, prevention

**Other genital tract injuries :**

- (a) Perineal tear
- (b) RVF

**Genital prolapse**

Types, aetiology, supports of uterus, clinical features, diagnosis, differential diagnosis, principles of management, prevention

**Endometriosis**

Definition, types, clinical features, principles of management

Neoplasia of reproductive organs

- Benign & malignant conditions of vulva & vagina
- Benign, precancerous & malignant conditions of cervix
- Benign and malignant conditions of uterus
- Benign and malignant tumours of ovary

Subfertility

- (a) Causes, investigation and management both male and female partner
- (b) Assisted reproductive techniques
- (c) Concepts of medical biotechnology in relation to Obstetrics

**Contraception**

Importance

Counselling

Classification, mechanism of action, advantages, disadvantages, complications of all methods particularly sterilization and MR & MRM

**Menopauses**

- (a) Definition, physiological basis, changes in different organs of body, clinical features of menopausal syndrome, principles of management
- (b) Post-menopausal bleeding
- (c) Hormone replacement therapy (HRT)

Principles of common gynecology operations : MVA, D&C, E&C , suction evacuation hysterectomy .

**Name of the Subject: Dental Science**

Total Marks-100

Part-I

Marks-50

**Anatomy & Dental Anatomy**

**Anatomy**

**5**

- Definition, subdivisions of Anatomy and its importance in the study of dental course
- Anatomical terminology and anatomical planes & positions
- Skeletal system- Bones – classification, composition, functions, parts of a developing long bone, blood supply, periosteum & endosteum. Ossification- definition, centres & processes. Factors affecting growth of bone
- Cartilages- composition, types, characters, locations and functions
- Joint : Definition, Component parts, classification, characteristics of each type & movements, stability of the joints. General plan of blood supply & nerve supply of joints
- Muscular system : classification, characteristics and functions
- Blood vascular system : component parts
- Nutrition & innervation of vessels. Vascular anastomosis
- Nervous system.
- Lymphoid organs : classification & functions
- Endocrine system : Component parts, situation, functions.
- Special sense organs : parts & functions.
- Human Cell : types, basic organization, constituents. Cell membrane
- Cytoplasm, organelles and inclusions
- nucleus
- Chromosomes : structure, classification, biochemical nature & chromosomal disorders (Down Syndrome, Turner's Syndrome, Klinefelter's syndrome)
- Gene, genotype and phenotype : definition

## Dental Anatomy

8

- different teeth in different dentition
- different histological structures of Oro-dental Tissues
- Differentiate between normal and pathological state of oral structures.
- Collagen
- Hard Tissue
- Dentine
- Pulp
- Enamel
- Cementum
- The periodontal Ligament
- Oral mucosa & Gingiva
- Alveolar bone
- Temporo-mandibular joint
- Salivary Glands
- Types of dentition, dental formula and notation.
- Shows various anatomical landmarks of teeth.
- Mention the chronology of deciduous and permanent teeth.
  
- Central incisors and their normal landmarks.
- Normal relationship in dental arch and clinical importance.
  
- Lateral incisors and their normal landmarks.
- Normal relationship of lateral incisors in dental arch and mention its clinical importance.
  
- Canines and their normal landmarks.
- Normal relationship and clinical importance.
  
- Premolars and their normal landmarks.
- Normal relationship and clinical importance.
  
- Maxillary molars and their normal landmarks.
- Normal relationship and clinical importance.
  
- Mandibular molars and their normal landmarks.
- Normal relationship and clinical importance.
  
- Deciduous teeth.
- Differentiate deciduous teeth from permanent teeth.

## Physiology & Biochemistry

7

- Transport processes across the plasma membrane, resting membrane potential, action potentials.
- Muscle contraction and relaxation.
- The function of heart and circulatory system.
- Respiratory processes with the knowledge of structures, ventilation, diffusion, blood flow, gas transport, mechanics of breathing and control of ventilation.
- Mechanism of work of the brain at the neuronal systems level.
- Autonomic nervous system and special sense.
- Function of endocrine physiology.
- Knowledge and understanding of biochemistry in medicine and surgery.
- Biomolecules forming the structure of the human body, their functions and their role in health and diseases.
- Role of enzymes in the diagnosis of diseases.
- Metabolic reactions in the body.
- Role of liver in the body.
- Mechanism of maintenance of homeostasis by regulating both the composition and volume of ECF compartment by the kidney.
- Water and electrolyte content of human body and their functions.
- Types, causes and consequences of dehydration and over hydration.
- Causes and the consequences of electrolyte imbalance.
- Sources of acids and bases in our body and the mechanism of their normal balance, causes and consequences of acidosis and alkalosis and the parameters to diagnose them.
- Diabetes mellitus, impairment of renal, liver and thyroid functions.

## Science of Dental Materials

10

- General properties [chemical, physical, mechanical and biological] of the materials.
- Materials to be used in dentistry.
- Composition, properties of the individual material.
- Bio-compatibility of the materials.
- Toxic and side effects of the materials and protective measures to be taken.
- Manipulation of the materials, its clinical and laboratory uses.
- Variables that affect the properties of the final products of the materials.
- Tarnish and corrosion and the preventive measures of the metallic made prostheses and restoratives used in the oral cavity.

## General Pharmacology & Dental Therapeutics

6

- Principles of rational prescribing and the basis of therapeutic decision making.
- Principles underlying the concepts of essential medicines.
- Teratogenic medicines.

- Pharmacokinetics and pharmacodynamics of essential and commonly used drugs in dentistry.
- Indications, contraindications, interactions and adverse reactions of commonly used drug in dentistry with reasons.
- Prescribe common and essential drugs in special medical situations such as pregnancy, lactation, old age, renal or hepatic damage and immune-compromised patients.
- Local anesthetics
- Root Canal Therapy
- Antiseptic and Disinfectants
- Astringents and Gingival displacement products
- Mummifying agents
- Dental Desensitizing agents and pharmacological control of Dentine hypersensitivity
- Anti-carries agents and pharmacological control of Dental Caries
- Antiplaque/antigingivitis agents
- Procoagulant, anticoagulant, Haemostatics
- Mouth wash and Dentifrices
- Tooth bleaching agents
- Agent affecting Salivation
- Pharmacology of pain and Anti-nociceptive drugs.

## Pathology & Microbiology

5

- Cell biology general concept.
- Inflammation, Degeneration, Necrosis and gangrene.
- Sterilization and disinfection.
- Disorder of growth: Tumors including cancers.
- Radiation, Hazards and prevention.
- Immunity, Immunization against common bacterial and viral infection. Immuno deficiency syndrome with special reference to AIDS.
- Common cause of diarrhea and phthogenesis and complication. General reaction to trauma. Hemorrhage and shock.
- Bacterial infections with special references to Enteric fever, Tuberculosis, Leprosy , Diphtheria, Whooping cough, Tetanus, Gas gangrene, Food poisoning, Strepto and staphylococcal infections, Bacillary dysentery, Cholera.
- Common viral disease like poliomyelitis, Chickens pox, Measles, Viral hepatitis, Rabies, Herpeszoster, HIV. AIDS. Dengue, COVID-19.
- Common parasitic disease Ascariasis, Ankylostomiasis( Hook worm infection).
- Common protozoal disease Malaria, Kala-Azar, Giardiasis.
- Sexually transmitted disease like, Gonorrhoea, Syphilis, elaneid, Nongonococcal urethritis.
- Routine laboratory procedure for peripheral blood film Urine and Blood examine for Hb% and ESR.
- General Bacteriology

- Immunology
- Molecular Biology
- Mycology
- Virology
- Systemic Bacteriology

**Preventive & Community Dentistry**

6

- i. Concept of health
- ii. Behavioral science
- iii. Immunity and Immunization including EPI.
- iv. Prevention of dental caries with fluorides.
- v. Food and dental caries.
- vi. Prophylactic and operative technique in dental caries prevention.
- vii. Prevention of periodontal disease and dental caries in individual and mass level.
- viii. Dental ancillaries.
- ix. Dental epidemiology, survey, and Introduction to Biostatistics.
- x. Parent counseling and child behavior.
- xi. Planning for Manpower requirements in dental public health.
- xii. An approach to dental Health Education for school children.
- xiii. Field programme-for oral health surveys, motivation and oral Health Education.
- xiv. In rural areas to conduct survey of dental disease, provide dental health education and emergency treatment.
- xv. School-Health Programme-Dental care for school children and preventive Programme-Topical fluoride application and oral hygiene demonstration.

**Dental Jurisprudence**

3

- i. Legal rights and protection.
- ii. Dental record keeping and person identification.
- iii. Ethics, particularly as they apply to the dental surgeon in his relation with parents, the public and his colleagues.
- iv. The ethics of epidemiological studies and other projects.
- v. An outline of forensic odontology.

## Dental Science

### Part-II

Marks-50

#### Oral Surgery and Anesthesia

13

- i. Acute infections of the Oral cavity—Acute infections of the jaws, periapical abscess, pericoronal infections, dissecting subperiosteal abscess, periodontal abscess, facial planes and spread of infections, acute cellulitis, Ludwig's angina, cavernous sinus thrombosis, differential diagnosis of neck swelling and lymph node enlargement in and around the jaws and the neck.
- ii. Hemorrhage diseases, disorders and lesions and complications associated with oral surgery.
- iii. Extraction of teeth—Indications and contra-indications for extractions or other surgical operations.
- iv. Cysts of bone and soft tissue of the oral cavity—Classification, development of cyst, general consideration of cystic lesions, treatment, post operative complication.
- v. Wounds and injuries of the soft tissues of the facial areas—General consideration and classification of wounds: concussion, abrasion, laceration, penetrating wounds, gunshot wounds, burns, treatment of wounds & burns.
- vi. Fractures of the jaws—Etiology, classification, examination, diagnosis, management and complications of fractures of mandible, maxilla zygoma and other facial bones.
- vii. Surgical aspects of the oral tumours—Tumours of the hard tissues of the cavity, odontogenic tumours, osteogenic tumours, pregnancy tumours, tumours of the soft tissues of the oral cavity, carcinoma of the oral cavity, diagnosis and treatment.
- viii. The temporomandibular joints—Anatomy, painful temporomandibular joint, aetiology symptoms, clinical findings, roentgen graphic findings and treatment of T.M.J. dislocation, Ankylosis with complications.
- ix. Pre-prosthetic Surgery—Edentulous ridge criteria, types of oral and extra oral surgical procedures, abnormalities of soft & osseous tissues, Frenectomy, ankyloglossia, ridge extension procedures.
- x. Plastic Surgery—Embryology, etiology, classification objectives, surgical correction of lip, alveolus and palate.
- xi. Local anaesthesia—Infiltration nerve block technique, the art of local indications and contra-indications of local anaesthesia.
- xii. General Anaesthesia—Role of general anaesthesia in dentistry, indications for general anaesthesia, preoperative preparation for in-patient or out patient general anaesthesia.

**Conservative Dentistry and Dental Radiology**

**15**

- i. Dental caries and classification of caries.
- ii. Class I and II cavity preparation in extracted molar teeth for silver amalgam restorations, Matrix band application, Insertion of lining materials, Amalgam plugging and finishing.
- iii. Class III and IV cavity preparation in extracted teeth and insertion and finishing of different anterior filling materials.
- iv. Class V cavity preparation in the extracted teeth and insertion and finishing of different filling materials.
- v. M.O.D. cavity preparation.
- vi. Retentive pin technique for different restoration.
- vii. Inlay preparation in the extracted teeth.
- viii. Jacket crown preparation in the extracted teeth.
- ix. Preparation of teeth for root canal treatment-Anaesthesia-isolation, surface sterilization.
- x. Root canal therapy.
- xi. Endodontics in children.
- xii. Periodontal diseases and the dental pulp.
- xiii. Problems in endodontics treatment.
- xiv. Technique of dental and oral radiography.
- xv. Radiation Hazard.

**Prosthodontics**

**10**

**Complete Denture Prosthesis**

- i. Impression procedure, preliminary and final.
- ii. Construction of cast from impression, base or permanent base & wax rim.
- iii. Selection of teeth (Shade & Mould).
- iv. Alignment of teeth.
- v. Trial of complete denture.
- vi. Finishing of complete denture, fitting the finished denture (insertion).
- vii. Complaints of patients.

**Partial Denture Prosthesis**

- i. Impression.
- ii. Treatment planning and mouth preparation.
- iii. Model Surveying.
- iv. Component parts of partial denture.
- v. Materials used in partial denture construction.
- vi. Design of partial dentures.
- vii. Wax pattern for cast denture and acrylic dentures.
- viii. Recording of occlusion.
- ix. Trial of partial denture.

### **Crown and Bridge Prosthesis**

- i. General indication of crown.
- ii. Tooth reduction steps & preparation of principle crown.
- iii. Full veneer crown.
- iv. Partial veneer crown.
- v. Inlay retainer.
- vi. Impression technique.
- vii. Construction of porcelain jacket crown.
- viii. Construction of veneered gold crown.
- ix. Construction of veneered jacket crown using resin.
- x. Abutment general principles retention and support.
- xi. Pontics.
- xii. Design of the pontic.
- xiii. Construction of bridge.

### **Cleft Plate and Oro-Facial Prosthesis**

- i. Obturation for intra oral loss at tissue by surgery.
- ii. Implant denture.

### **Orthodontics**

6

- i. Definition, Aims objectives and scope of Orthodontics.
- ii. Growth and development of jaws, face and skull.
- iii. Normal occlusion and its characteristics, factors responsible for establishment and maintenance of normal occlusion.
- iv. Soft tissue morphology and behaviour.
- v. Malocclusion, Types: Arch and skeletal classification.
- vi. Aetiology of Malocclusion.
- vii. Types, design of appliances and anchorage.
- viii. Appliances for different tooth movement.
- ix. Preventive, Interceptive and corrective treatment of Malocclusion.
- x. Extractions in orthodontics.

### **Medicine**

3

- Various manifestations of common medical diseases.
- Basic principle of history taking and clinical examinations.
- Physical examination including examination of an unconscious patient and patient of syncope.
- Correlate the clinical symptoms and physical signs to make a provisional diagnosis of common diseases and suggest relevant investigation & Interpret reasonably.
- Initial management of commonly encountered medical problem.
- Diagnose and refer acute medical emergencies like acute myocardial infarction, acute pulmonary edema acute anaphylactic and hypovolemic shock, status asthmatics, tension pneumothorax, hyperpyrexia, hemoptysis, gastro-intestinal bleeding, diabetic coma, common poisoning etc.

**Surgery**

3

- Show cordial attitude towards patients, colleagues and stuffs.
- History taking & writing.
- Proper general, local and systemic examination
- Common surgical problems
- Consider the differential diagnosis and complications
- Rational laboratory investigations and imaging.
- Interpretation of investigation results of common surgical problem.
- Provide first aid and refer complicated patients to proper center.
- Adopt universal precaution against HIV, hepatitis.
- Staff and patient safety in ward, OT and OPD.
- Sterilization, asepsis and infection prevention.