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MD[Pathology]
BF/2007/12

**Pathophysiology & General Principles of Pathology
including applied Pathology
[Paper-I]**

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1.
 - a. Discuss the pathogenesis of atherosclerosis. [20]
 - b. Discuss the pathogenesis and molecular basis of Prion diseases. [20]

 2. **Write short notes on:**
 - a. Fluorescence in Situ hybridization technology and its application in histopathology. [10]
 - b. Role of Selectins and Integrins in acute inflammation. [10]
 - c. Opportunistic infections. [10]

 3. **Describe briefly about:**
 - a. Renal transplant rejection. [10]
 - b. Thrombotic microangiopathies. [10]
 - c. Risk factors for development of Carcinoma breast. [10]
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MD[Pathology]

BF/2007/12

Immunopathology, Molecular Biology, Cytogenetics and Experimental Pathology including cancer research [Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe special stains, immunology and electron microscopy studies on breast malignancy. [35]

 2. Write short notes on: [35]
 - a. Telomeres and Telomerases.
 - b. Applied aspects of Chemokines.
 - c. Laboratory diagnosis of Hepatitis C virus infection.

 3. Describe mechanism of Immunologic tissue injury. [30]
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MD[Pathology]

BF/2007/12

**Histo-Pathology-Cytology including Recent Advances in the
concerned topics
[Paper-III]****Time : 3 Hours****M.M.: 100***Note: Attempt all questions.*

1. Describe role of Cytopathology in the diagnose of Breast lesions.
[25]
 2. Write notes on: [25]
 - a. Systemic Mastocytosis.
 - b. Cytogenetics and Molecular genetics in lymphomas.
 3. Describe classification and histogenesis of Testicular tumours.
[25]
 4. Describe the role of protein products of Oncogenes in causation of malignancy.
[25]
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MD[Pathology]

BF/2007/12

Haematology, Immunoheamatology & Blood Transfusion with recent advances in the concerned topics [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. What are the indications for Platelet transfusion? Discuss factors effecting the recovery and survival of platelets after transfusion. [25]
 2. Write notes on:
 - a. Gene therapy in haematology. [12¹/2]
 - b. Idiopathic myelofibrosis. [12¹/2]
 3. Discuss quality assurance in blood transfusion services. [25]
 4. Describe the molecular basis of hereditary Spherocytosis and its clinical variants. [25]
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226

MD[Pediatrics]

BF/2007/12

Basic Sciences as related to Pediatrics **[Paper-I]**

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the physiology of bone formation, metabolism of vitamin D and reasons for renal rickets. [20]
 2. Write the algorithm for approach to a neonate presenting with hyperbilirubinemia at 2 weeks of age. Discuss the mechanisms of Rh isoimmunization. [20]
 3. Diagrammatically show the development of kidneys and enumerate causes of hydronephrosis. Write management of a neonate detected to have hydronephrosis antenatally. [20]
 4. Give the rationale of Zn therapy in acute childhood illnesses. [10]
 5. Define Short Stature. Discuss the non endocrinal causes of short stature. [10]
 6. Describe the pathophysiology of DKA. [10]
 7. Write a note on prenatal diagnosis & Genetic counselling. [10]
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MD[Pediatrics]

BF/2007/12

Principles and Practice of Pediatrics [Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the differential diagnosis of a premature, 30 weeks gestation baby with respiratory distress soon after birth. Describe the principle of ventilatory management of such neonate. [30]
 2. Discuss briefly:
 - a. Management of raised intracranial pressure. [20]
 - b. Asplenia - Polysplenia syndrome. [20]
 3. Write short notes on:
 - a. Merits and demerits of IMNC protocol. [10]
 - b. Classification of severity and grades of asthma. [10]
 - c. Bell's staging of neonatal necrotising enterocolitis. [10]
-

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MD[Pediatrics]

BF/2007/12

Preventive & Social aspects of Pediatrics and Diseases of Neonates & Infants [Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. An approach to inborn error of metabolism and discuss various important defects in metabolism of CARBOHYDRATES. [30]
 2. Discuss briefly:
 - a. Intrauterine diagnosis of Foetal disease. [15]
 - b. An approach to a bleeding neonate. [15]
 3. Write notes on: [4x10=40]
 - a. Mental retardation.
 - b. Human milk fortifiers.
 - c. Influenza vaccine.
 - d. Gilles de La Tourette syndrome.
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MD[Pediatrics]

BF/2007/12

Recent advances in Pediatrics [Paper-IV]

Time : 3 Hours

M.M.: 100

*Note: Attempt all questions.
All Questions carry equal marks*

Write short notes on:

1. Pain perception physiology in premature babies & its management in NICU.
 2. Clinical application of CPAP in management of neonatal Respiratory Distress syndrome.
 3. Acute liver failure in children - Epidemiological differences in developing and developed countries. Discuss the recent advances in its management.
 4. Role of Racecadotril in treatment of Acute diarrhoeal disorders.
 5. Hyperoxia test and its role in evaluation of neonate with suspected congenital heart disease.
 6. Immune Reconstitution inflammatory syndrome in HIV.
 7. Stem cell transplantation and its role in non-malignant disorders.
 8. Is there a place for surfactants in pediatric ICU.
 9. Role of Phosphodiesterase inhibitors in Congestive Cardiac failure.
 10. Pathophysiology of Gut flora in critically sick child and rationale for using Probiotics.
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MD[Medicine]

BF/2007/12

Basic Sciences as related to Medicine

[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the pathogenesis of Septic Shock. Briefly discuss the role of activated Protein C in its management. [25]

 2. Describe the pathogenesis and clinical course of Hepatitis C viral infection. Enumerate extrahepatic manifestations related to Hepatitis C infection. [25]

 3. **Write short notes on:** [30]
 - a. Erythropoietin.
 - b. Indications for Plasmapheresis.
 - c. Non Invasive Ventillation.

 4. **Discuss briefly:** [20]
 - a. Non alcoholic fatty liver diseases.
 - b. Assessment of severity of Bronchial asthma.
-

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MD[Medicine]

BF/2007/12

Principles of Medicine

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss etiopathogenesis, clinical picture, diagnosis and management of Dengue Haemorrhagic fever. [30]
 2. Describe etiopathogenesis, clinical profile, diagnosis and management of Nephrotic syndrome. [30]
 3. Write notes on:
 - a. Metabolic syndrome: diagnostic criteria, consequences and management strategies. [14]
 - b. Febrile Neutropenia. [13]
 - c. Sleep apnoea syndrome. [13]
-

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MD[Medicine]

BF/2007/12

Practice of Medicine

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the role of Free Oxygen Radicals & Inflammatory markers in atherosclerosis. [25]
 2. Write notes on:
 - a. Prinzmetal's Angina. [15]
 - b. Bisphosphonates therapy in osteoporosis. [10]
 3. Discuss the following: [10x5=50]
 - a. Haemodialysis.
 - b. Metabolic acidosis.
 - c. Treatment modalities in resistant seizures.
 - d. Antiretroviral therapy.
 - e. Sick-Euthyroid syndrome.
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Q33

MD[Medicine]

BF/2007/12

Recent Advances in Medicine [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the recent concepts in the management of acute ischaemic Stroke. [20]
 2. Discuss the recent advances in the management of Multiple Myeloma. [20]
 3. Discuss the current trends in the management of Migraine. [20]
 4. Write short notes on: [20]
 - a. Incretins.
 - b. Avian Influenza.
 5. Discuss in brief: [20]
 - a. Single ring enhancing CT lesions.
 - b. Immunisation in adults.
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MD[Obstetrics & Gynaecology]

BF/2007/12

Basic Sciences as related to Obstetrics and Gynaecology [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the haematological changes in pregnancy. What are the factors which predispose to Deep Vein Thrombosis in obstetric patients. [40]
 2. Write short notes on: [2x15=30]
 - a. Management of Pain in endometriosis.
 - b. Preventing Uretric injuries in gynaecological surgery with special reference to Pelvic course of Ureter.
 3. Write short notes on: [2x15=30]
 - a. Fetal therapy.
 - b. Development of Stem cell therapy.
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MD[Obstetrics & Gynaecology]

BF/2007/12

Obstetrics including diseases of Neonates [Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. List the causes of Anaemia during pregnancy and discuss management of a case of severe anaemia at 34 weeks of pregnancy. [25]
 2. What are the factors affecting Rh sensitization? Write the management of Rh sensitized pregnancy at 26 weeks of gestation. [25]
 3. Write short notes on:
 - a. Recent advances in drug therapy in pregnancy induced Hypertension. [10]
 - b. Newer technique in dealing Post partum haemorrhage. [10]
 4. Write notes on:
 - a. Perinatal mortality in India. [10]
 - b. Drugs contraindicated during Lactation. [10]
 - c. Risk assessment tests to predict preterm labour, current role of steroids in preterm labour. [10]
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MD[Obstetrics & Gynaecology]

BF/2007/12

Principles and Practice of Gynaecology and Gynaecological Pathology [Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Enumerate the causes of Post Menopausal bleeding. Discuss the various screening methods for early detection of Carcinoma Cx. [20]
 2. Describe the causes of Infertility and how will you manage a case of Pri infertility, new approaches. [20]
 3. Write short notes on: [2x10=20]
 - a. Newer Oral contraception.
 - b. Management of Ovarian tumors.
 4. Write short notes on: [2x10=20]
 - a. Medical management of Fibroid uterus.
 - b. Management of Choriocarcinoma.
 5. Describe the causes of chronic Pelvic pain and how will you manage at 35 years woman. [20]
-

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MD[Obstetrics & Gynaecology]

BF/2007/12

Recent Advances in Obstetrics & Gynaecology [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

Write notes on:

[10x10=100]

1. Levonorgestrel I.U.S. (Mirena).
 2. Biophysical profile.
 3. Perinatal mortality (causes & prevention).
 4. Problems of a diabetic baby.
 5. Partogram.
 6. Cardiotocography.
 7. Neoadjuvant chemotherapy.
 8. Management of atonic PPH.
 9. Management of pregnant woman with HIV infection.
 10. Investigations of an infertile couple.
-

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MD[Dermatology,Venereology & Leprosy]

BF/2007/12

Basic Sciences as related to Dermatology,STD & Leprosy [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe Ultrastructure of Dermo-epidermal junction and enumerate bullous dermatoses affecting this junction. [40]
 2. Write short notes on: [10x6=60]
 - a. Normal skin flora.
 - b. Wood's Lamp.
 - c. Structure of M. Leprae.
 - d. Acetowhite test.
 - e. Lepromin test and its significance.
 - f. Skin failure.
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MD[Dermatology,Venereology & Leprosy]

BF/2007/12

Principles and Practice of Dermatology,STD & Leprosy [Paper-II]

Time : 3 Hours

M.M.: 100

*Note: Attempt all questions.
All questions carry equal marks.*

1. Discuss Pustular Psoriasis.
 2. Discuss differential diagnosis of progressive Macular hypomelanosis.
 3. Discuss role of Zinc in Skin pathology.
 4. Acetretin.
 5. Perioral dermatitis.
 6. Persisters in Leprosy.
 7. Chronic Idiopathic Urticaria.
 8. Photo Patch testing.
 9. Post test counseling in HIV/AIDS.
 10. Lentiginosis.
-

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MD[Dermatology, Venereology & Leprosy]

BF/2007/12

Histopathology, Leprology and Venereology [Paper-III]

Time : 3 Hours

M.M.: 100

*Note: Attempt all questions.
All questions carry equal marks.*

1. Urethritis in males - causes and management.
 2. Acute retroviral syndrome.
 3. Barrier methods for S.T.D. prevention - advantages & disadvantages.
 4. Donovanosis.
 5. Bacterial index in leprosy.
 6. Histoid Leprosy.
 7. Drug resistance in leprosy.
 8. Animal models in leprosy.
 9. Histochemical staining methods & uses.
 10. Suprabasal keratinocyte separation - cause & their salient features.
-

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MD[Dermatology, Venereology & Leprosy]

BF/2007/12

Recent advances in Dermatology, Leprosy & Venereology and General medicine as related to Dermatology [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Aetiopathogenesis of Androgenetic alopecia. [15]
 2. IRIS. [15]
 3. Lab diagnosis of Herpes genitalis. [15]
 4. Role of vaccines in Leprosy. [15]
 5. Biological therapies in dermatology. [15]
 6. Low dose Isotretinoin in Acne. [15]
 7. Discuss ANOTHER syndrome. [10]
-

242

MD[Anaesthesiology]

BF/2007/12

Basic Sciences as applied to Anaesthesiology [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the factors controlling intracranial pressure. Discuss the different methods of reducing ICP. [25]
 2. Describe anatomy of Larynx. Discuss the various vocal cord palsies. [25]
 3. Describe Thermoregulatory mechanism in adults. How is it different in new born. [25]
 4. Write short notes on: [25]
 - a. Blood components.
 - b. COX-2-specific inhibitors.
 - c. Interpretation of Pulmonary function test.
 - d. Rocuranium.
 - e. Minimum alveolar concentration.
-

243

MD[Anaesthesiology]

BF/2007/12

Clinical Sciences as applied to Anaesthesiology [Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss pathophysiology and anaesthetic consideration in a premature infant with Congenital diaphragmatic Hernia. [20]
 2. Discuss the anaesthetic management of a pregnant female with diabetic ketoacidosis posted for emergency caesarian section. [20]
 3. Discuss in brief: [30]
 - a. Myasthenic syndrome.
 - b. Anaesthetic consideration in space surgery.
 - c. Liquid ventilation.
 4. Discuss: [30]
 - a. Hazards of mobile phone in O.T.
 - b. Supraglottic airway devices.
 - c. Merits and demerits of TPN.
-

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MD[Anaesthesiology]

BF/2007/12

Principles and Practice of Anaesthesiology [Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

All questions carry equal marks.

1. Role of TEE in anaesthesia.
 2. Anaphylaxis during anaesthesia.
 3. Anticoagulation and central neural blockade.
 4. Difficult airway in neonate.
 5. Role of NIRS as an intraoperative monitor.
 6. Problems of Cervical spine surgery during anaesthesia.
 7. Anaesthetic management of diabetic patient with stiff joint syndrome.
 8. **Compare:**
 - a. SNP Vs. NTG.
 - b. TIVA Vs. IVRA.
 9. Brain protection in ICU.
 10. Anaesthetic consideration of postpartum hemorrhage.
-

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MD[Anaesthesiology]

BF/2007/12

Recent advances in Anaesthesiology including principles of resuscitation and Intensive care therapy [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Nutrition requirement in critical care patients. Discuss the advantages and disadvantages of Parenteral and enteral nutrition. [20]
 2. Morbid Obesity and anaesthetic implications. [20]
 3. Discuss in brief: [3x10=30]
 - a. Continuous Spinal anaesthesia.
 - b. Management of Septic shock.
 - c. Management of Perioperative arrhythmias.
 4. Write short notes on: [3x10=30]
 - a. Desflurane.
 - b. Intraoperative Bronchospasm.
 - c. Miss Match Transfusion.
-

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MD[Physiology]
BF/2007/12

General Physiology
[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Classify Neurotransmitters. Describe cellular and molecular mechanism of their release. [30]
 2. Write short notes on: [4x10=40]
 - a. Role of Stem cell in regenerative medicine.
 - b. Apoptosis.
 - c. Body mass index.
 - d. G protein mediated signal transduction pathways.
 3. Describe the transport across and through the cell membrane. [30]
-

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MD[Physiology]

BF/2007/12

Clinical sciences as related to Physiology [Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe physiological changes on high altitude exposure. And discuss the mechanism of development, of high altitude Pulmonary and Cerebral edema. [34]

 2. Write the physiological basis of: [33]
 - a. Human Chromosome and its abnormalities.
 - b. Echo Cardiography.
 - c. Sleep Apnea syndrome

 3. Write in short on: [33]
 - a. Visual field & its defects.
 - b. Respiratory Sinus arrhythmia.
 - c. Rheologic properties of blood.
-

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MD[Physiology]

BF/2007/12

Biophysics, Biochemistry & Histology related to systemic physiology [Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Give the sources and amount of Urea in the Urine under different situations. Add a note on its clinical significance. [30]
 2. Discuss the physiological basis of disturbance of Volume, osmolality and Acid base balance of body fluids. Explain, how body compensation is brought about? [30]
 3. Write short notes on any TWO of the following: [20x2=40]
 - a. Mechanism of operation of Na^+ - K^+ pump.
 - b. Methods employed to measure membrane potential.
 - c. Goldman-Hodgkin-Katz (GHK) equation.
-

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MD[Physiology]
BF/2007/12

Systemic Physiology including recent advances
[Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the structure and functions of Vestibular apparatus. Add a note on Vestibular function tests. [25]
 2. Write notes on the following: [15x3=45]
 - a. Ultrastructure and functions of Platelets.
 - b. Deglutition reflex.
 - c. Regulation of renal blood flow.
 3. Explain giving physiological basis of: [10x3=30]
 - a. Formation of gall stones.
 - b. Anaemia in Chronic renal disease.
 - c. Alzheimer's disease.
-

950

MD[Pharmacology]

BF/2007/12

Clinical and other basic sciences as related to Pharmacology [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. **Write short notes on following:** [35]
 - a. Selective estrogen receptor modulators.
 - b. Misuse of antimicrobial agents.
 - c. Contribution of biotechnology in new drug development.
 - d. Antipseudomonas penicillins.

 2. **Write drug treatments of :** [30]
 - a. Hypertension in pregnancy.
 - b. Thyrotoxicosis.

 3. **Write an account of:** [35]
 - a. Principles of controlled clinical trial.
 - b. Method used for monitoring ADR.
 - c. Advances in drug delivery system.
-

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MD[Pharmacology]

BF/2007/12

General & Systemic Pharmacology [Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the recent concepts of mechanism of action of drugs used for the following conditions: [20]
 - a. Type II Diabetes Mellitus.
 - b. Rheumatoid arthritis.
 2. Write an essay on Pharmacogenomics. [20]
 3. Describe the pharmacological basis of drugs used in the management of Congestive Heart Failure[CHF]. [20]
 4. Write short notes on: [10x4=40]
 - a. Evaluation of drug safety.
 - b. Bio-equivalence.
 - c. Drug - tolerance.
 - d. Nitric Oxide.
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25

MD[Pharmacology]

BF/2007/12

Experimental & Clinical Pharmacology [Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe screening methods for: [30]
 - a. Anti hypertensice agents.
 - b. Anti inflammatory agents.

 2. Write short notes on: [40]
 - a. Sequential trials.
 - b. Mutagenicity studies.
 - c. Advantages and disadvantages of cross-over clinical trails.
 - d. Serious adverse drug reactions.

 3. Give brief account of: [30]
 - a. Constitution and functions of ethics committee.
 - b. ANOVA.
-

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MD[Pharmacology]

BF/2007/12

Recent Advances in Pharmacology [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. **Give an account of:** [40]
 - a. Different insulin preparations and insulin regimens.
 - b. Drugs for the treatment of Osteoporosis.
 2. **Discuss in brief:** [30]
 - a. Agents for the treatment of Herpes Simplex Virus infection.
 - b. Drugs used in the treatment of Obesity.
 - c. Calcium channels -pharmacological relevance.
 3. **Write short notes on:** [30]
 - a. Immunomodulators.
 - b. Pharmacotherapy of multi drug resistant tuberculosis.
 - c. Drugs used for treating breast Carcinoma.
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