

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. CARDIOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – I

Q.P. Code: 1501

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe the development of interventricular septum and pathophysiology of various types of ventricular septal defect. (4+6)
2. Discuss Cardiac cycle. Add a note on the role of pressure volume loops and parameters in relation to cardiac function. (5+5)
3. Describe Fick's principle.
4. Explain renin angiotensin aldosterone system and drugs at different level of blockade. (5+5)
5. Discuss JVP in health and disease.
6. Discuss the molecular basis of cardiac action potential. Add a note on the etiopathogenesis of channelopathies. (5+5)
7. Explain in detail on genetics of sudden cardiac death.
8. Discuss the pathophysiology of vulnerable plaque.
9. Discuss HIS bundle electrogram in health and disease.
10. Explain a) Intention to treat analysis and coefficient of correlation (5+5)
(b) Basic design of Randomized Control Trial.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. NEUROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – I

Q.P. Code: 1505

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. What is the role of acetylcholine in neurotransmission in peripheral and central nervous system?
2. Describe the anatomy of sympathetic nervous system & its functions. (5+5)
3. Discuss the pharmacodynamics and uses of Cenobamate. (5+5)
4. Draw a neat labeled diagram of cross section of Medulla Oblongata.
5. Discuss anatomy of basal ganglia.
6. Discuss myelination in peripheral nervous system.
7. Discuss different types of neurotransmitters in brain.
8. Describe the application of magnetic resonance spectroscopy in neurological disorders.
9. Discuss genetics of Parkinson's disease.
10. Describe the layers and types of Cerebral cortex. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
M.Ch. UROLOGY**Time: 3 Hours****Max. Marks: 100****PAPER – I****Q.P. Code: 1509**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Discuss the surgical anatomy of the kidney and its surrounding structures. (3+4+3)
What are the key considerations when performing nephrectomy? How to manage common complications associated with this procedure?
2. Explain the role of contrast-enhanced CT in urology, particularly in the evaluation of renal tumors.
3. Discuss the diagnosis, classification and management of emphysematous pyelonephritis. Highlight the role of imaging modalities and indications for surgical intervention. (5+2+3)
4. Discuss the sterilization and maintenance protocols for reusable urological scopes.
5. A patient undergoing a radical prostatectomy has a suspicious lymph node that requires intraoperative consultation. The pathology results suggest involvement of the lymph node by metastatic prostate cancer. How will this information influence the surgical approach? What subsequent steps should be taken during the operation to manage the finding? (4+6)
6. Describe the various types of intracorporeal lithotripters and their mechanism of action. (5+5)
7. Discuss pathophysiological mechanisms contributing to nocturia.
8. Explain role of DNA fragmentation test in Semen analysis.
9. Discuss indications, precautions and technique of Clean Self-Intermittent Catheterization. (3+3+4)
10. Formulate an ERAS protocol for use of bowel during urological reconstructive surgery.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**M.Ch. NEUROSURGERY****Time: 3 Hours****Max. Marks: 100****PAPER – I****Q.P. Code: 1521**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Describe the anatomy of 4th ventricle and its blood supply. (5+5)
2. Which are lower cranial nerves? Explain the pathway of hypoglossal nerve. (5+5)
3. Draw a neat labeled diagram of cross sectional anatomy of Pons. Discuss its blood supply. (5+5)
4. Describe steps of neurulation with neat diagram/s. Add a note on various defects of neurulation. (5+5)
5. Discuss the etiology of trigeminal neuralgia. Explain microvascular decompression. (5+5)
6. What are the various electrodiagnostic studies used in neurology? Explain EMG. (5+5)
7. Differentiate between conductive and sensory-neural hearing loss. What are the causes of sensory neural hearing loss? (5+5)
8. What is normal intracranial pressure? How do cardiac and respiratory activities affect intracranial pressure? (5+5)
9. Describe the anatomy of hypothalamus and its blood supply. (5+5)
10. What are the craniometric points used in neurosurgery? What are the methods used as an external landmark to localize the motor cortex? (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. MEDICAL GASTROENTEROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – I

Q.P. Code: 1533

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe functional anatomy of mucosal immune system.
2. Describe in detail development of Portal vein.
3. Describe non-bacterial members of intestinal microbiome.
4. Describe the assessment of Sarcopenia. Add a note on its management. (5+5)
5. Discuss the role of nutrition in chronic pancreatitis and decompensated Cirrhosis. (5+5)
6. Describe the indications and complications of total parenteral nutrition. Explain nutrition management in critically ill patient. (6+4)
7. List the causes and discuss evaluation of chronic diarrhoea. (3+7)
8. Enlist causes of Obscure GI Bleeding. Discuss management of Severe Obscure Overt GI Bleeding. (3+7)
9. Explain in detail the clinical features and management of Common variable Immunodeficiency (CVID). (5+5)
10. Discuss the management of protein- losing enteropathy.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. NEPHROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – I

Q.P. Code: 1537

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Explain the embryological development of the kidneys. Highlight the **three** distinct stages of kidney formation. (4+6)
2. Describe the physiological mechanisms by which the kidneys regulate calcium homeostasis. How do hormones like parathyroid hormone (PTH), calcitriol and fibroblast growth factor 23 (FGF23) modulate renal calcium handling. (4+6)
3. Discuss the role of the loop of Henle in the countercurrent multiplier system. How does this system contribute to the kidney's ability to concentrate urine? (6+4)
4. How does potassium-sparing diuretics affect renal potassium handling? Discuss their adverse effects. (6+4)
5. Explain the physiological role of the kidneys in maintaining uric acid homeostasis. How do the kidneys contribute to the balance between uric acid excretion and plasma uric acid concentration? (5+5)
6. Explain the role of the kidneys in maintaining acid-base balance in the body. How do the kidneys regulate the pH of blood by adjusting the excretion of hydrogen ions (H^+) and bicarbonate (HCO_3^-)? (6+4)
7. What is the Cockcroft-Gault equation? How is it used to estimate GFR? Discuss the strengths and limitations of this equation. (4+3+3)
8. Discuss the role of various histological stains in the diagnosis of kidney diseases.
9. What is the role of imaging in the management of renal transplant patients? Discuss the use of ultrasound, Doppler ultrasound, CT and MRI in evaluating graft function. (6+4)
10. Discuss the role of the kidneys in maintaining the balance between bone resorption and formation. (6+4)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**M.Ch. SURGICAL ONCOLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – I****Q.P. Code: 1541**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Enumerate the obesity associated cancers. Discuss obesity and lack of physical activity related to carcinogenesis. (2+8)
2. Discuss establishment of tobacco cessation clinic.
3. Define Screening. Discuss the evidence associated with screening for breast cancer. (2+8)
4. Discuss various types of clinical trials with respect to principles, study design applications and advantages. Discuss in detail the need and impact of RCTs in oncology. (6+4)
5. A 40 year old gentleman comes with diagnosis of pancreatic cancer. His uncle died of prostate cancer at the age of 45 year and his paternal aunt has breast cancer. Discuss the genetic testing to be advised to this person.
6. What is cancer genome? Enumerate various sequencing method. Describe in detail any **one** of them. (2+3+5)
7. Describe the mechanism of action of VEGF inhibitors. Enumerate the side effects. Discuss the management of the side effects. (4+2+4)
8. Name all the key features of different evaluation criteria WHO, RECIST 1.0 and Recist 1.1. Describe the alternate response criteria that are used in quantifying various tumour types. (6 +4)
9. Discuss Sestamibi scan.
10. Discuss quality of Life Instruments & its relevance in cancer treatment.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. PAEDIATRIC NEUROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – I

Basic Sciences as applied to Paediatric Neurology

Q.P. Code: 1545

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Define Ventriculomegaly. Discuss the prenatal diagnosis of ventriculomegaly and its prognostic factors. (2+8)
2. Describe EEG Ontogeny. Discuss its clinical implications. (3+7)
3. Explain with a schematic diagram the action of common anti-seizure medications on excitatory and inhibitory synapses. (5+5)
4. Discuss the prenatal diagnosis of posterior fossa anomalies.
5. Classify malformations of cortical development. Discuss the role of genetic counseling in these conditions. (4+6)
6. Define False Neurological signs and Soft Neurological signs. Enumerate common false and soft neurological signs. Discuss the clinical relevance. (3+3+4)
7. Describe Survival Analysis. Discuss its utility in research. (2+8)
8. Classify nerve fibres. Compare the clinical features of large and small fibre neuropathies. (4+6)
9. Describe pathogenesis of Immune Reconstitution Inflammatory Syndrome (IRIS) with reference to CNS tuberculosis.
10. Define genomic imprinting. Discuss the role disorders of genomic imprinting in pediatric neurology. (2+8)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. INTERVENTIONAL RADIOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – I

Q.P. Code: 1554

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe the anatomy of the dural venous sinuses with a diagram. Add a note on various techniques of endovascular management of acute cerebral venous sinus thrombosis. (5+5)
2. Describe coeliac and superior mesenteric vascular anatomy with a diagram. Add a brief note on its importance in liver transplant surgery. (5+5)
3. A 50-year-old male presents with sudden onset chest pain radiating to back. Create a detailed evaluation and treatment plan for this condition. (5+5)
4. Classify peripheral vascular malformations as per ISSVA. Explain the pathophysiology of peripheral vascular malformations. Discuss treatment options for a 12-year-old child with venous malformation in thigh. (3+2+5)
5. Explain the role of statins, antiplatelet and anticoagulant therapy in peripheral arterial disease. (3+3+4)
6. Define and classify Heparin Induced Thrombocytopenia (HIT). Add a note on mechanism of heparin induced thrombocytopenia. Formulate a plan to treat a 35 year old patient with Heparin induced thrombocytopenia. (3+2+5)
7. Outline the clinical trials evaluating the role of endovascular therapy in arteriovenous malformations in the brain. Discuss findings of ARUBA-1 & BARBADOS clinical trials. (5+5)
8. Classify Embolic Agents. Add a note on vascular plugs. (5+5)
9. Discuss quality control in interventional radiology.
10. Organize implementation of ALARA principle in day to day practice of Interventional Radiology.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**D.M. ENDOCRINOLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – I****Q.P. Code: 1558**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Enumerate Nobel prizes in endocrinology and add a brief note on each topic. (4+6)
2. Discuss GNAS pathway and applied patho-physiology in endocrinology. (5+5)
3. Describe Regulation of hypothalamo pituitary adrenal axis.
4. Explain the role of RAS kinase pathway in insulin action. Discuss insulin paradox. (5+5)
5. Discuss types of SSTR and their role in health and disease. (2+4+4)
6. Describe feedback regulations of gonadal steroidogenesis.
7. Discuss adipose tissue as an endocrine organ.
8. Discuss Oral GLP1 therapy.
9. Discuss about the genetics of short stature.
10. What is KI 67 index? Discuss its role in neuroendocrine tumors. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. CARDIAC ANESTHESIA

Time: 3 Hours

Max. Marks: 100

PAPER – I

Q.P. Code: 1525

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe anatomy of aortic root with neat labeled diagram.
2. Discuss the physiology of **one** lung ventilation under anaesthesia.
3. Describe the coagulation cascade and various tests to assess coagulation status. (5+5)
4. Define ischemic pre-conditioning. Add a note on remote ischemic pre-conditioning under anesthesia. (6+4)
5. Enlist various methods of blood conservation in cardiac surgery. Describe side effects of stored blood transfusion. (5+5)
6. Classify Ino-dilators. Discuss the role of Milirinone in cardiac surgery. (4+6)
7. Discuss pathophysiology of acute myocardial infarction and its complications. (5+5)
8. Classify anti-arrhythmic agents. Discuss indications, contraindications and side effects of Amiodarone during perioperative cardiac care. (5+5)
9. Discuss factors causing cerebral injury during conduct of CPB. Add a note on neuroprotective strategies used to prevent perioperative stroke. (4+6)
10. Describe management of hypoxia during CPB.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**M.Ch. PAEDIATRIC SURGERY****Time: 3 Hours****Max. Marks: 100****PAPER – I****Q.P. Code: 1529**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Describe the various physiological responses to surgical stress in newborns and children. Describe the role of the hypothalamic-pituitary-adrenal axis in response to surgical stress in children. (5+5)
2. Describe the sexual differentiation in humans with respect to chronology and various genes responsible for normal sexual differentiation. Add a note on Alfred Jost and Natalie Jose experiments. (6+4)
3. Describe the indications for vascular access in pediatric patients undergoing surgery. Explain the different types of vascular access commonly used in children during surgery and their complications. (5+5)
4. Describe the clinical presentation of sepsis in neonates and children. Explain the investigative diagnosis of sepsis, treatment and prognosis in these age groups. (5+5)
5. Discuss the association of Nephroblastoma with other congenital syndromes. Describe how these syndromes influence the development of Wilms' tumor. (5+5)
6. Describe the concept of Refeeding syndrome in children undergoing nutritional support after surgery. Describe the benefits of early enteral feeding in GI surgeries. (5+5)
7. Explain the principles of Computerized tomography (CT) scan, Magnetic resonance imaging (MRI) and Positron emission tomography (PET) scans in paediatric surgery. Describe the indications of PET scan in paediatric surgery. (5+5)
8. Describe the various radiopharmaceuticals agents used in nuclear imaging of obstructive cholangiopathy. Describe the interpretations of mebrofenin scan for obstructive cholangiopathy. (5+5)
9. Explain the basic principles of chemotherapy in pediatric solid tumors. Describe the mechanisms of action of different classes of chemotherapy drugs used in pediatric surgery. (5+5)
10. Describe the principles and types of physiological monitoring in children undergoing anesthesia and surgery. Describe regional anaesthesia for lower abdominal surgeries in children. (7+3)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. CARDIOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – II

Q.P. Code: 1502

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the Genetic risk scores for premature coronary artery disease.
2. Discuss physiological assessment of coronary artery stenosis.
3. Discuss Fourth universal definition of Myocardial Infarction.
4. Discuss left ventricular aneurysm and its management. (5+5)
5. Discuss myocardial bridging and its management. (2+8)
6. Discuss Excimer laser angioplasty.
7. Discuss current management of left main disease.
8. Discuss role of Cardiac MRI in congenital heart disease.
9. What is Heterotaxy syndrome? Add a note on right and left isomerism. (4+6)
10. Discuss Lutembacher syndrome & its management. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. NEUROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – II

Q.P. Code: 1506

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the evaluation and management of autoimmune encephalitis.
2. Discuss the evaluation of stroke in young adult.
3. Discuss approach to Progressive External Ophthalmoplegia.
4. Discuss management of Alzheimer's diseases.
5. Discuss the clinical features and treatment of myelin Oligodendrocytes glycoprotein antibody disease. (5+5)
6. Discuss approach to Refractory status Epilepticus.
7. Discuss the management of Trigeminal Autonomic Cephalgias (TACS).
8. Discuss young onset Parkinson's disease.
9. Describe clinical features of acute inflammatory myopathy in young adult.
10. Discuss approach to chronic meningitis.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**M.Ch. UROLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – II****Q.P. Code: 1510**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Discuss the strategies to prevent ureteral injuries during gynecological surgeries.
2. Discuss the pathophysiology, diagnosis and treatment of urological obstruction in renal transplant recipients. Mention its common causes. How does obstruction affect graft function? (4+3+3)
3. Discuss the management of locally advanced renal cell carcinoma.
4. Discuss the medical management of urinary lithiasis, including the use of medical expulsive therapy (MET), pharmacological agents and dietary modifications. (3+3+4)
5. Discuss the etiological factors, clinical evaluation and diagnostic approach for erectile dysfunction. (3+3+4)
6. A 45-year-old male presents with pelvic pain, dysuria and perineal discomfort for the past 3 months. His urine culture is negative and a digital rectal examination reveals a mildly tender prostate. Discuss the management strategy for this patient.
7. Discuss the evaluation of a child with penoscrotal hypospadias.
8. Discuss fusion biopsy of prostate. Add a note on its indications, advantages and limitations. (3+7)
9. Discuss the prognosis and long-term follow-up for patients with testicular cancer. What factors influence survival outcomes? What are the potential long-term complications? (5+2+3)
10. Discuss the various diagnostic tools that are employed in a suspected case of urinary tuberculosis.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
M.Ch. NEUROSURGERY**Time: 3 Hours****Max. Marks: 100****PAPER – II****Q.P. Code: 1522**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Describe the pathophysiology of signs and symptoms of supratentorial brain tumours. Enumerate the "false-localising" signs in these patients. (5+5)
2. Discuss the etiology and management of cervical radicular pain in a 60 year old diabetic male patient. (3+7)
3. Discuss the types, investigations and treatment aspects of lumbar spondylolisthesis. (2+3+5)
4. Discuss the types, indications and surgical differences of various lumbar interbody fusion techniques. (3+3+4)
5. Discuss the etiology, diagnosis and management of discogenic lower back pain. (2+3+5)
6. Outline the common clinical symptoms of Acoustic Schwannomas. Add a note on treatment options for Acoustic Schwannomas. How do they differ based on tumor size and patient factors? (3+4+3)
7. A 2 year old male child presents with increasing head size and vomiting. Discuss the possible differential diagnosis and its management. (3+7)
8. Discuss the modalities, indications, types and fallacies of intraoperative monitoring of the spinal cord and nerve roots. (3+3+4)
9. What are the common primary cancers that lead to metastatic brain tumors? Describe the characteristic features of metastatic brain tumours on MRI. (3+7)
10. Discuss the classification and management of lipomyelomeningocele. (4+6)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. MEDICAL GASTROENTEROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – II

Q.P. Code: 1534

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Define Walled off Pancreatic Necrosis. Explain the natural history and management of the same. (2+3+5)
2. Discuss diagnosis, clinical features and management of cystic neoplasms of pancreas. (3+3+4)
3. Describe pathogenesis of acute pancreatitis. Write a note on Atlanta classification of acute pancreatitis. (5+5)
4. Classify and outline management of choledochal cysts. (5+5)
5. Describe indeterminate biliary strictures. Discuss various modalities for diagnosis, their advantages & limitations. (3+7)
6. Explain diagnosis and management of sphincter of oddi dysfunction. (5+5)
7. Discuss various tests used for diagnosis of minimal hepatic encephalopathy.
8. Discuss replication cycle of Hepatitis B virus to highlight potential target for development of therapeutic strategies. What are the newer drugs for Hepatitis B virus? (6+4)
9. Discuss pathophysiology of alcoholic hepatitis. Add a note on role of gut microbiome in cirrhosis of liver. (5+5)
10. Discuss hepatic disorders unique to pregnancy.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. NEPHROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – II

Q.P. Code: 1538

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the management of steroid-resistant Minimal Change Disease.
2. Discuss C3 glomerulopathy.
3. Discuss current concepts of Atypical HUS.
4. Discuss the pathology of diabetic kidney disease.
5. Discuss the diagnosis and management of renovascular hypertension. (5+5)
6. Discuss the management of pregnant lady with Lupus nephritis.
7. Discuss the genetics, pathogenesis and clinical features of ADPKD. (3+3+4)
8. Discuss fungal infections of urinary tract.
9. Discuss the causes and clinical features of nephrocalcinosis. (6+4)
10. Describe renal involvement in multiple myeloma. Add a note on management. (7+3)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**M.Ch. SURGICAL ONCOLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – II****Q.P. Code: 1542**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Describe evaluation and management of Thymic carcinoma. (5+5)
2. Write a note on Mohs micrographic surgery. Briefly describe management of basal cell carcinoma of head and neck. (5+5)
3. Write a note on etiology, staging and management of extremity soft tissue sarcoma. (3+2+5)
4. Describe surgical anatomy of liver. Write indications and contraindications for surgery of hepatocellular carcinoma. (5+5)
5. Discuss the management of neck in oral cavity cancer.
6. Outline the classification of gastro-esophageal junction adenocarcinoma. Discuss management of adenocarcinoma of gastro-esophageal junction. (5+5)
7. Enumerate Paraneoplastic syndromes associated with various cancers. Write a note on Zollinger Ellison syndrome. (5+5)
8. Discuss pathophysiology, clinical presentation and treatment of spinal cord compression in metastatic lung adenocarcinoma. (3+3+4)
9. Discuss sphincter preservation approaches in the management of rectal cancer.
10. Discuss management of incidental gall bladder carcinoma.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. PAEDIATRIC NEUROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – II

Q.P. Code: 1546

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the role of psychiatric co-morbidities in children with epilepsy.
2. Define Childhood Chronic Immune Demyelinating Polyneuropathy (CIDP). How to differentiate CIDP from inherited neuropathies. (5+5)
3. Discuss the role of neuroimaging in febrile seizures.
4. Define Cerebral Visual Impairment. Discuss its clinical features and treatment strategies. (4+6)
5. Define Chorea. Enumerate the common causes of chorea. Discuss the diagnosis and treatment of chorea in children. (2+3+5)
6. Discuss the metabolic evaluation and treatment of autistic spectrum disorders. (5+5)
7. Define Rational Anti-seizure Drug Therapy. Discuss its role in management of drug resistant epilepsy. (3+7)
8. A six year old girl presents with imbalance in walking and clumsiness in handling objects in last two years. How to approach and manage this child? (6+4)
9. Discuss the importance of pre-hospital management of seizures. Compare the various methods of pre-hospital management of seizures in children. (5+5)
10. Define functional neurological disorders. Discuss the principles of management of functional neurological disorders. (3+7)

**POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. INTERVENTIONAL RADIOLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – II****Q.P. Code: 1555**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. A 35 year old male presents to emergency department with acute onset aphasia & left hemiplegia since 2½ hours. Create a detailed evaluation and clinical management to treat this patient in a hospital. (5+5)
2. Discuss pathology & clinical presentation of dural AVF. Explain assessment of angioarchitecture using image guidance for management of dural AVF. (5+5)
3. Describe the role of IR in life threatening hemoptysis. Illustrate the types of bronchial arterial anatomy with a neat labeled diagram. (5+5)
4. Analyze the role of interventional radiology in the locoregional treatment of non-small cell lung cancer, including chemoembolization and radiofrequency ablation. (5+5)
5. Classify thoracoabdominal aneurysms and discuss their management. (5+5)
6. Illustrate various percutaneous interventions for infrapopliteal / below the knee (BTK) peripheral arterial disease. (5+5)
7. Outline angiographic anatomy of genicular arteries. Justify the use of Imipenem/Cilastatin for genicular artery embolization. (7+3)
8. Explain techniques of percutaneous interventions for vertebral disc and facet joint pathologies. Discuss in brief percutaneous laser discectomy. (6+4)
9. Formulate a detailed imaging plan for a 21 year old with blunt trauma abdomen. Discuss in brief the endovascular therapeutic options for this patient. (5+5)
10. Discuss clinical management of tunneled hemodialysis catheter. Add a note on endovascular AV fistula creation. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. ENDOCRINOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – II

Q.P. Code: 1559

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. A 74 year old female, known diabetic and hypertensive, presents to the emergency with altered sensorium for 3 days. Investigations reveal a blood glucose of 240 mg/dl, sodium of 112 mEq/L and potassium of 4.8 mEq/L. Elaborate the diagnostic approach and management in this patient. (5+5)
2. Explain the measures of glycemic variability determined by continuous glucose monitoring and their clinical importance. (5+5)
3. A 16 year male presents with history of bilateral chest enlargement noted since the last 3 months. Examination confirms bilateral tender gynecomastia and testicular volume is 8 ml bilaterally. Outline the investigative and management approach in this patient (5+5)
4. Outline the investigative approach in a case of PTH-dependent Hypercalcemia.
5. Discuss the management considerations in an adolescent female with classical CAH (21-hydroxylase deficiency).
6. Outline the regulation of hypothalamo-pituitary-adrenal axis. Briefly discuss the approach to manage a case of exogenous Cushing's syndrome. (5+5)
7. Enumerate common drugs implicated in drug-induced Hyperprolactinemia. Discuss the approach to management in these patients. (4+6)
8. Discuss the role of metformin in management of gestational diabetes mellitus.
9. Discuss HIV associated endocrinopathies.
10. Discuss indications, efficacy and safety concerns of modalities for medical management of obesity. (3+4+3)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. CARDIAC ANAESTHESIA

Time: 3 Hours

Max. Marks: 100

PAPER – II

Q.P. Code: 1526

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Name various Pre-anaesthetic risk assessment scoring systems available for cardiac surgery evaluation. Describe in detail "EuroSCORE II". (4+6)
2. Describe anaesthetic management of percutaneous transcatheter balloon mitral valvotomy for 46 year old female diagnosed with rheumatic mitral stenosis.
3. Draw a neat diagram of normal electrocardiogram (ECG). Discuss various abnormal rhythms encountered during conduct of coronary artery bypass surgery. (4+6)
4. Draw a neat labeled diagram depicting normal CVP waveform. Discuss various abnormal CVP waveforms in cardiac abnormalities. (4+6)
5. Discuss the management of difficulty in weaning off from cardiopulmonary bypass following coronary artery bypass surgery (CABG) and MV repair performed for a patient with triple vessel disease and severe MR.
6. Discuss grading of aortic regurgitation. Discuss the anaesthetic management of patient with significant AR undergoing aortic valve replacement. (4+6)
7. Discuss the anaesthetic management of patient with atrial septal defect undergoing minimally invasive ASD closure surgery.
8. Discuss Transesophageal echocardiographic features in pericardial tamponade. Write a note on anaesthetic implications of pericardial tamponade for emergency re-exploration procedure. (4+6)
9. How does the redo-cardiac surgery differ from routine cardiac case? Discuss briefly the anaesthetic considerations for a redo aortic valve surgery. (5+5)
10. Classify aortic aneurysms. Discuss the anaesthetic management of patient with aortic root aneurysm undergoing Bentall's procedure. (2+8)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**M.Ch. PAEDIATRIC SURGERY****Time: 3 Hours****Max. Marks: 100****PAPER – II****Q.P. Code: 1530**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Explain the anatomy of thoracic duct. Briefly describe pathogenesis of Chylous ascites at birth. Explain the investigations and the management of Chylous ascites. (3+3+4)
2. A 3 year old child presents with large abdominal mass, hypertension and anaemia. Discuss the approach in diagnosis and surgical planning of this case. (5+5)
3. A day old neonate presented at delivery with noisy breathing. Describe the causes, clinical features and investigations to diagnose stridor. Describe the management of subglottic stenosis at this age. (5+5)
4. Discuss in detail antenatal & postnatal prognostic factors in Congenital Diaphragmatic Hernia (CDH). Add a note on use of extra corporeal membrane oxygenation (ECMO) in CDH. (5+5)
5. Describe the presentation and management of pneumothorax in a 4 month infant. Add a note on clinical features and management of pneumatocele. (5+5)
6. Discuss etiology, clinical features and management of Duplication cysts of the foregut. (3+3+4)
7. Discuss the clinical features, grading, diagnostic approach and management of pediatric lower limb lymphedema. (2+2+2+4)
8. Discuss ISSVA classification for vascular anomalies. Add a note on management of Kaposiform haemangioma of extremity. (5+5)
9. Describe the various anomalies and syndromes associated with Exomphalos major. Describe the problems faced in primary repair of exomphalos major. (5+5)
10. Discuss the various benign causes of liver lesions. Discuss the presentation and management of infantile hemangioendothelioma of the liver. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. CARDIOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – III
RHD, Hypertension, Cardiomyopathy and other
Cardiovascular Diseases

Q.P. Code: 1503

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the management of pregnant woman with metallic heart valve.
2. Define and discuss types of cardiac amyloidosis. (2+8)
3. Write a note on Cardiomyopathy induced by Chemotherapeutic drugs.
4. Define the principles of treatment of pulmonary hypertension.
5. Discuss daily management of a patient with IABP.
6. Discuss the management of Peripartum Cardiomyopathy.
7. Describe the impact of air pollution on cardiovascular diseases.
8. Discuss the effect of dairy products on cardiovascular diseases.
9. Discuss secondary hypertension.
10. Discuss the role of 24-hour ambulatory blood pressure monitoring.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. NEUROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – III

Clinical Neurology and Investigative Neurology

Q.P. Code: 1507

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe the role of magnetic resonance imaging in epilepsies.
2. An 8 year old boy born out of consanguineous marriage has come with proximal muscle weakness and waddling of gait. Discuss the differential diagnosis, evaluation and management of the same. (4+3+3)
3. Discuss clinical features of Refsum's disease.
4. Discuss the clinical features and management of Amoebic encephalitis. (5+5)
5. Discuss the principles and role of MR spectroscopy in diagnosing various neurological disorders of brain. (5+5)
6. Discuss role and limitations of various modalities of imaging in acute stroke.
7. Discuss neurological manifestations of Vitamin B₁₂ deficiency.
8. Discuss clinical features and management of lead poisoning.
9. A young lady has come with acute onset right hemiparesis, seizures on the background of poly arthritis and skin rash. Discuss the differential diagnosis, evaluation and management of this case. (4+3+3)
10. A young man has come with acute diarrhoea followed by progressive ascending paralysis. Discuss the differential diagnosis, evaluation and management of the same. (4+3+3)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**M.Ch. UROLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – III
Specialty Urology****Q.P. Code: 1511**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Discuss the challenges in management of large or invasive adrenocortical carcinoma. Highlight the role of adjuvant therapies and follow-up. (6+4)
2. Compare and contrast the use of synthetic versus autologous tissue slings in the management of stress urinary incontinence. (5+5)
3. Explain the role of microsurgical techniques in the management of male infertility. Discuss how these techniques have improved outcomes in procedures like varicocele, sperm retrieval and vasal surgery. (3+7)
4. Discuss the various indications for ureteric reimplantation, including anatomical and functional abnormalities. Compare the different surgical techniques such as the Lich-Gregoir, Politano-Leadbetter and other variations, outlining their advantages and disadvantages. (3+7)
5. Discuss the International Society of Pediatric Oncology (SIOP) and Children's Oncology Group (COG) protocols for managing Wilm's tumor. Highlight the differences in their treatment strategies. (5+5)
6. Discuss the surgical options for managing meatal stenosis in adults. Include the role of meatotomy and meatoplasty, their indications and their long-term outcomes. (5+5)
7. Outline the role of shockwave lithotripsy in the management of upper urinary tract calculi. Explain the mechanism of action, indications, contraindications, complications and patient selection for shockwave lithotripsy. Compare it with other non-surgical options. (3+4+3)
8. Discuss the role of endourological techniques in the management of ureteral strictures. What are the indications, limitations and success rates of these techniques? (5+5)
9. Explain the principles and techniques of surgical intervention for the management of upper urinary tract obstruction caused by a renal stone.
10. Explain surgical techniques for management of obstructive Azoospermia.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
M.Ch. NEUROSURGERY

Time: 3 Hours

Max. Marks: 100

PAPER – III

Q.P. Code: 1523

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the indications, techniques, outcome and complications of Endoscopic third ventriculostomy.
2. Discuss the classification and uses of anticonvulsants. (5+5)
3. Discuss the indications, technique and outcomes of Epilepsy surgery. (4+4+2)
4. Discuss the neuropathology, clinical features and management options in Parkinson disease. (4+3+3)
5. Discuss the molecular and cellular basis of brain injury. (4+6)
6. Discuss the causes, clinical and radiological features of Brain death. Add a note on brain death declaration protocol. (7+3)
7. Discuss late complications of traumatic brain injury and their management. (6+4)
8. Describe the surgical and endovascular management of carotid occlusion disease. Add a note on recommendation of NASCET and ACST trials. (8+2)
9. Discuss endovascular management of intracranial aneurysm. Add a note on investigations, techniques and complications. (2+8)
10. Discuss the clinical features, evaluation and management of Vein of Galen malformations. (3+4+3)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**D.M. MEDICAL GASTROENTEROLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – III****Clinical and Investigative Gastroenterology****Q.P. Code: 1535**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

- | | |
|--|-------|
| 1. Discuss endoscopic grading in corrosive injury of esophagus with approach to its management. | (5+5) |
| 2. Discuss pathophysiology and management of Barrett's esophagus. | (5+5) |
| 3. Describe premalignant conditions associated with gastric cancers. | |
| 4. Explain pathogenesis and management of H. Pylori infection. | (4+6) |
| 5. Discuss diagnosis and management of peptic ulcer disease. | (5+5) |
| 6. Discuss Surveillance of patients with inflammatory bowel disease. Add a note on SCENIC consensus guidelines. | (5+5) |
| 7. Outline indications and adverse events of usage of biological therapy for ulcerative colitis. | (5+5) |
| 8. Explain chemoprevention of colorectal cancer. Add note on outcome of this approach in preventing colorectal cancer. | (5+5) |
| 9. Discuss diagnostic criteria and management of microscopic colitis. | (5+5) |
| 10. Differentiate between small bowel Crohn's versus Ileocecal tuberculosis. | |

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. NEPHROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – III
Dialysis and Transplantation

Q.P. Code: 1539

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe the skin manifestations of chronic kidney disease. Write in detail about calcific uremic arteriolopathy. (4+6)
2. Discuss FGF 23 in CKD.
3. Discuss indications and advantages of Hemoperfusion. (5+5)
4. Describe sustained low efficiency dialysis.
5. Discuss residual renal function. How to preserve it? (5+5)
6. Discuss peritoneal dialysis fluid.
7. Discuss the advantages and limitations of PD compared to hemodialysis. (5+5)
8. Discuss the clinical features, diagnosis and management of CMV infection in a renal transplant patient. (2+4+4)
9. Describe Rubin's time table of infections post-transplant.
10. Discuss denovo glomerular disease in renal transplant.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

M.Ch. SURGICAL ONCOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – III

Specialty Surgical Oncology

Q.P. Code: 1543

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the evaluation and management of 6 cm bilateral adnexal masses with ascites in a 55 year old lady. (5+5)
2. Discuss the evaluation and management of 4 cm inguinal lymph node in a case of carcinoma penis. (5+5)
3. Discuss the management of non-muscle invasive bladder cancer and follow up after completing the treatment. (7+3)
4. Describe in detail various surgical options for management of carcinoma vulva.
5. Briefly write about brachytherapy in carcinoma cervix. Discuss about the complications associated with adjuvant chemo radiation in carcinoma cervix. (5+5)
6. Discuss role of surgery in oncologic emergencies.
7. Discuss the management of high-risk basal cell carcinoma of skin.
8. Discuss Peritoneal Cancer Scoring Index. Add a note on peritonectomy. (3+7)
9. Discuss Neutropenic Enterocolitis.
10. Write the recent TNM staging for cutaneous melanoma. Add a note on the principles of biopsy for the same. (6+4)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. PAEDIATRIC NEUROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – III

Recent Advances in Paediatric Neurology

Q.P. Code: 1547

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the role of functional hemispherotomy in pediatric neurology.
2. Discuss the recent advances in the treatment of spinal muscular atrophy.
3. Define third generation antiseizure medications. Name them. Enumerate the newer antiseizure medications in pipeline. (2+2+6)
4. Discuss the role of genetics in pediatric stroke.
5. Define novel oral anticoagulants and direct oral anticoagulants (DOACs). Discuss their role in pediatric neurology. (3+7)
6. Discuss the role of deep brain stimulation in pediatric neurology.
7. Define Magnetic Source Imaging. Discuss its clinical applications. (3+7)
8. Describe the recent advances in the management of tuberous sclerosis.
9. Discuss the role of genetic testing in Cerebral Palsy.
10. Define Precision Medicine. Illustrate precision medicine in pediatric neurology with examples. (2+8)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. INTERVENTIONAL RADIOLOGY**Time: 3 Hours****Max. Marks: 100****PAPER – III****Q.P. Code: 1556**

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number	Marks
ESSAY QUESTIONS:	10 X 10 = 100
1. Describe in detail amniocentesis and chorionic villus sampling.	(5+5)
2. Discuss the indications, contraindications, technique and complications of portal vein embolization. Add a note on future liver remnant.	(6+4)
3. Explain the various IR management options for malignant biliary strictures.	
4. Describe transvenous renal biopsy in detail. Write a short note on percutaneous approach to renal haemorrhage.	(6+4)
5. Discuss LIRADS. How to plan a Y90 transarterial radioembolization procedure?	(4+6)
6. Discuss fallopian tube recanalization in detail. Add a note on IR management of ovarian cysts.	(5+5)
7. Discuss various breast biopsy techniques. Add a note on wire localization for breast lesions.	(6+4)
8. Discuss the physics and technique of cryoablation. Describe the cold sink effect.	(6+4)
9. Summarize the indications, contraindications, technique and complications of uterine artery embolization.	(2+2+4+2)
10. Draw a neat labeled diagram of external carotid artery and its branches. Write a short note of meningioma embolization.	(5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**D.M. ENDOCRINOLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – III****Q.P. Code: 1560**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Discuss the role of priming in GH stimulation tests.
2. Discuss the risk and side effects of RAI therapy. (5+5)
3. What is hook effect? Discuss its implications in the management. (5+5)
4. A 14 year old boy presented with short stature (height at -4SD). Discuss the clinical and laboratory evaluation of this patient. (5+5)
5. Discuss Radioactive Iodine therapy in thyroid disorder.
6. Discuss the method, advantages and disadvantages of insulin tolerance test in evaluation of adrenal insufficiency. (4+3+3)
7. Discuss the factors affecting results of HbA1c estimation.
8. Discuss the interpretation of thyroglobulin in DTC.
9. Discuss the methods and clinical utility of parathormone assays. (5+5)
10. Enumerate different bone formation and resorption markers. Discuss their role in the management of osteoporosis. (4+6)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**D.M. CARDIAC ANAESTHESIA****Time: 3 Hours****Max. Marks: 100****PAPER – III****Q.P. Code: 1527**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. Discuss pathophysiology of Coarctation of Aorta (CoA). Discuss anaesthetic management of Coarctation repair through left thoracotomy. (3+7)
2. Discuss different types of anomalous pulmonary venous connections. Discuss perioperative anaesthetic management of infra cardiac TAPVC repair surgery. (3+7)
3. Discuss the indications of balloon atrial septostomy. Write a note on anaesthetic management of arterial switch surgery with emphasis on post-operative issues. (4+6)
4. List left to right shunts in congenital heart diseases. Discuss anaesthetic management of ASD device closure in cath lab. (3+7)
5. Discuss Bernoulli's principle used in cardiac ultrasound. Write a note on principles of Doppler echocardiography. (5+5)
6. Enlist the mid-esophageal views obtained at various multiplane angle positions. Discuss utility of mid-esophageal aortic valve long axis view in detail with a neat labeled diagram. (4+6)
7. Enlist the transgastric views obtained at various multiplane angle positions. Discuss utility of transgastric RV inflow-outflow view (TGRV inflow-outflow) in detail with a neat labeled diagram. (4+6)
8. Enlist different types of oxygenators used in conduct of CPB. Write a note on ECMO oxygenator. (4+6)
9. Enlist different blood conservation techniques in cardiac surgery requiring CPB. Write a note on antegrade and retrograde autologous priming. (4+6)
10. Draw a neat labeled diagram of cardioplegia delivery system. Write a note on pros and cons of antegrade and retrograde cardioplegia delivery. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

M.Ch. PAEDIATRIC SURGERY

Time: 3 Hours

Max. Marks: 100

PAPER – III

Q.P. Code: 1531

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Define Ureterocele. Describe the theories of development of ureterocele. Explain the investigations & management of all types of ureteroceles. (2+3+5)
2. Describe the duplication of urethra. Describe the presentation, classification and management of various duplications of urethra. (2+2+2+4)
3. Discuss anatomy of biliary system. Describe various approaches to bile drainage after excision of choledochal cyst. Briefly discuss their advantages and disadvantages. (3+3+4)
4. Describe the factors that work to prevent gastro esophageal reflux. Briefly discuss the clinical features, diagnosis, treatment and complications of gastro esophageal reflux in children. (2+2+2+2+2)
5. Discuss bile metabolism. Describe the management of obstructive jaundice in a 2 month old baby. (3+7)
6. Describe various types of neurogenic bladder. Explain the urodynamics in
a. Exstrophy bladder (postoperative status).
b. Neurogenic bladder.
c. Valve bladder. Add a note on management of valve bladder.
7. Define Hypersplenism. Enumerate the various causes of Splenomegaly. Describe the indications of splenectomy in hemolytic anaemias. (2+3+4)
8. Describe the newer technology in diagnosis of DSDs. Explain the FISH and genetic studies in evaluation of DSDs. Describe role of laparoscopy in DSDs. (3+4+3)
9. Describe the Cloacal exstrophy. Describe the aetiology, pathogenesis, investigations and surgical management of the Cloacal exstrophy. (2+8)
10. Describe embryology of anorectal malformation. Explain the evaluation and management of a boy with high anorectal malformation with fecal soiling after completion of all stages of surgeries. (3+7)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. CARDIOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV
Recent Advances in Cardiology

Q.P. Code: 1504

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Compare OCT versus IVUS.
2. What is Speckle Tracking Echocardiography? Discuss its applications. (2+8)
3. Write a note on indications, procedure and complications of Extracorporeal Membrane Oxygenation (ECMO). (3+4+3)
4. Discuss mechanism of action, dose and side effects of Bempedoic acid (4+3+3)
5. Describe clinical trials of SGLT2 inhibitors.
6. Write the indications and methods of LBBB pacing. (5+5)
7. Compare multi-vessel stenting versus CABG.
8. Discuss indications and complications of Eximer LASER angioplasty. (7+3)
9. How to identify and treat no reflow phenomenon? (5+5)
10. Discuss indications and procedure of Orbital Atherectomy. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026**D.M. NEUROLOGY****Time: 3 Hours****Max. Marks: 100****PAPER – IV
Recent Advances****Q.P. Code: 1508**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number**Marks****ESSAY QUESTIONS:****10 X 10 = 100**

1. A middle aged man has come with progressive dysphagia, dysphonia and dysarthria. Discuss the differential diagnosis, evaluation and management of this case. (4+3+3)
2. Classify autonomic neuropathies. Discuss bedside autonomic functions test and laboratory evaluation of the same. (3+4+3)
3. Discuss role of deep brain stimulation in various neurological disorders.
4. Discuss muscle biopsy findings in Duchenne's muscular dystrophy. Describe various stains used for the same. (5+5)
5. Discuss the role of diffusion tensor imaging in neurological disorders.
6. Discuss newer pain modifying agents in neuropathic pain.
7. Discuss recent advances in management of critical care neuropathy.
8. Discuss REM sleep disorders and role of polysomnography in sleep disorders. (5+5)
9. Discuss role of stem cell therapy in neurological disorders.
10. Discuss clinical features and imaging in Cerebral Amyloid Angiopathy. (5+5)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
M.Ch. UROLOGY**Time: 3 Hours****Max. Marks: 100****PAPER – IV**
Operative Urology and Recent Advances in Urology**Q.P. Code: 1512**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number	Marks
ESSAY QUESTIONS:	10 X 10 = 100
1. Discuss the role of the Rezum procedure in the management of BPH, focusing on patient selection, mechanism of action, efficacy and post-procedure outcomes.	(3+3+2+2)
2. Discuss the advances in angioembolization techniques for managing benign prostatic hyperplasia (BPH). What are the recent improvements in procedural efficacy and safety?	(5+5)
3. Discuss the mechanism of action of Platelet-Rich Plasma (PRP) therapy in the treatment of erectile dysfunction. Highlight the recent advances in understanding its biological effects on penile tissue regeneration.	(6+4)
4. Mention the advantages of using high-definition cameras and robotic systems in laparoscopic urology? Identify its future in our nation.	(5+5)
5. Explain the mechanism of action of the Uro-Lift system in treating benign prostatic hyperplasia.	
6. Explain the types of interferon's and their biological effects. Discuss their use in the treatment of renal cell carcinoma and superficial bladder cancer. Outline the benefits, limitations and side effects of interferon therapy in urology.	(6+2+2)
7. Discuss the role of Lutetium-177 (Lu-177) in the management of metastatic prostate cancer. Include its mechanism of action, clinical applications and potential side effects.	(5+5)
8. Explain the various urinary biomarkers used in bladder cancer, such as UroVysion, NMP22 and bladder cancer antigen (BTA). Discuss their sensitivity, specificity and clinical relevance in different stages of bladder cancer.	(5+5)
9. Mention the indications and outcomes of using antibody-drug conjugates like Enfortumab Vedotin in urothelial carcinoma.	(5+5)
10. Critically evaluate the role of cryotherapy in the management of testicular cancer, focusing on new developments in cryoablation and their clinical outcomes.	(3+3+4)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

M.Ch. NEUROSURGERY

Time: 3 Hours

Max. Marks: 100

PAPER – IV

Q.P. Code: 1524

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe the procedure & applications of MIB index in brain tumor. (5+5)
2. Discuss the principles, indications and limitations of Programmable VP shunt. (4+3+3)
3. Discuss the techniques and clinical applications of neural transplantation. (5+5)
4. Describe MR angiography of the brain. Add a note on it's applications and limitations. (4+3+3)
5. Discuss the principles, indications and limitations of Neuroendoscopy. (4+3+3)
6. Discuss the genetic factors in pathology of intracranial gliomas.
7. Discuss techniques including recent advances, various types of implants and outcomes in management of Degenerative Cervical spine disc disease. (4+3+3)
8. Discuss clinical features, diagnosis and management of Craniosynostosis including recent advances. (3+3+4)
9. Discuss the principles and applications of MRI guided focused ultrasound in Neurology and Neurosurgery. (5+5)
10. Discuss latest advances in management of Traumatic Brain injury.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. MEDICAL GASTROENTEROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV

Recent Advances in Gastroenterology

Q.P. Code: 1536

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss normal gut flora. Give indications for fecal microbiota transplantation (FMT). Explain complications of FMT. (3+4+3)
2. Define machine learning in artificial intelligence. What are the components of machine learning? Discuss the role of artificial intelligence in diagnosis and management of colorectal carcinoma. (3+4+3)
3. Discuss current status of Imatinib in GIST management. Describe role of various mutations described in GIST. Add a note on alternative treatment options for GIST resistant to Imatinib. (4+3+3)
4. What is hygiene hypothesis? Add a note on Novel Immunotherapeutic Agents and their mode of action in Crohn's disease. (3+7)
5. Describe normal anatomy of anal sphincter with a neat labeled diagram. Add a note on role of EUS in diagnosis of ano-rectal diseases. (6+4)
6. Discuss recent advances in endoscopic management of GERD.
7. Discuss genetics of NAFLD. Explain indications for liver biopsy in NAFLD. (6+4)
8. Describe staging of Hepatocellular Carcinoma (HCC). Discuss recent advances in systemic therapy in HCC. (4+6)
9. Describe Narrow Band Imaging. Discuss confocal laser Endomicroscopy (5+5)
10. Discuss role of EUS in liver disease. Compare the pro and cons of EUS assisted liver biopsy. (6+4)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. NEPHROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV
Recent Advances in Nephrology

Q.P. Code: 1540

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. How can pharmacogenomics enhance drug therapy in nephrology, particularly in patients with renal impairment?
2. Discuss the role of artificial intelligence (AI) in early detection and risk stratification of chronic kidney disease (CKD). (6+4)
3. Discuss the current understanding of ABO-incompatible kidney transplantation and recent guidelines. (6+4)
4. Discuss the mechanisms underlying immune rejection in xenotransplantation, focusing on the role of xenoreactive antibodies and the complement system.
5. How are biomarkers helping in early diagnosis and monitoring of disease progression? (6+4)
6. Discuss Newer Oral Anticoagulants (NOACs) in CKD and dialysis. (6+4)
7. Describe donor-derived cell-free DNA (dd-cfDNA) in contributing to improving the sensitivity and specificity of rejection diagnosis. (6+4)
8. Discuss comparative efficacy of HIF stabilizers versus conventional ESA therapy, including patient outcomes, dosing and ease of use. (5+2+2+1)
9. Discuss the impact of COVID-19 on kidney function in individuals with pre-existing kidney conditions. What mechanisms contribute to worsening renal health in these patients during the infection? (5+5)
10. Discuss the recent trials in high flux dialysis and their conclusions.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
M.Ch. SURGICAL ONCOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV
Operative Surgical Oncology + Recent Surgical Oncology

Q.P. Code: 1544

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Describe HITHOC.
2. Write in detail about the role of ICG in thoracic surgery.
3. Discuss the use of 3D and virtual tools in surgical oncology. (5+5)
4. Discuss the advantages and disadvantages of e-cigarettes. (5+5)
5. What are radiopharmaceuticals? Enumerate various radiopharmaceutical agents with their uses in oncology. (3+7)
6. Discuss World Health Organization cancer pain guidelines.
7. Discuss the role of TORS in HNSCC with evidence.
8. Discuss on cancer survivorship and cancer rehabilitation. (5+5)
9. Discuss ASPEN and ESPEN recommendations for the use of nutrition support in cancer patient. (5+5)
10. Explain various isotopes used in PET scan.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. PAEDIATRIC NEUROLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV

Thematic Concepts in Paediatric Neurology

Q.P. Code: 1548

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the diagnostic and therapeutic approach to autoimmune encephalitis in children, with an emphasis on NMDA receptor encephalitis. (5+5)
2. Discuss the role of multiple ligation dependent probe amplification (MLPA) utility in Paediatric Neurology
3. Discuss the interplay between sleep disturbances and neurodevelopmental disorders in children.
4. Enumerate the common causes of developmental regression in children. Discuss the diagnostic approach. (4+6)
5. Discuss the role of Radiogenomics in Pediatric Neurology.
6. How do sensory processing disorders manifest in children with neurodevelopmental conditions? Give examples. (5+5)
7. Discuss the role of Pharmacologic therapy of Attention Deficit-Hyperactivity Disorder.
8. Explain the principles of neuroprotection in hypoxic-ischemic encephalopathy (HIE).
9. How to plan a pre-surgical evaluation for a child with drug refractory epilepsy. Discuss the available surgical options. (5+5)
10. Discuss the evolving spectrum of Encephalopathy with spike wave activation in slow wave sleep.

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. INTERVENTIONAL RADIOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV
Recent Advances in Whole body Imaging and Interventional Radiology

Q.P. Code: 1557

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number	Marks
ESSAY QUESTIONS:	10 X 10 = 100
1. Discuss in detail Mean Aneurysm Flow Amplitude (MAFA) ratio and its application in neurovascular diseases.	(4+6)
2. Describe the role of Cone Beam CT (CBCT) in prostate artery embolisation.	
3. Discuss the difference between Vertebroplasty and Kyphoplasty. Add a note on the “Kiva VCF” system.	(6+4)
4. Discuss the role of Artificial Intelligence in Interventional Radiology.	
5. Evaluate the role of Irreversible Electroporation (IRE) in the management of solid organ tumors.	
6. Describe thyroid artery embolisation in detail. Add a note on IR management options of benign thyroid nodule.	(5+5)
7. Summarize the recent advances in atherectomy devices.	
8. Discuss the role of CLaCS and Venaseal in the treatment of varicose veins.	(5+5)
9. Outline the principles of regenerative therapies. Add a note on role of stem cell therapy in 'desert foot'.	(6+4)
10. Discuss percutaneous fenestration techniques and branch preservation techniques in aortic interventions.	

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026
D.M. ENDOCRINOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV

Q.P. Code: 1561

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Define aggressive pituitary adenomas. Discuss the role of Temozolamide in their management. (3+7)
2. Discuss preoperative management of Pheochromocytoma.
3. Discuss the evidence for T3 therapy in management of hypothyroidism.
4. Describe working of closed loop insulin pumps. Add a note on their indications in contemporary management of diabetes. (6+4)
5. Discuss the role of gut microbiota in pathogenesis of disability.
6. Discuss the evidence for novel glucocorticoid replacement therapies.
7. Discuss the role of AMH estimation in reproductive endocrinology.
8. Discuss the karyotype phenotype correlation in Turner's syndrome.
9. Discuss the newer drugs used in the management of obesity.
10. Discuss the pathophysiology and management strategies for post-transplant diabetes mellitus (5+5)

KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.

[Declared as Deemed-to-be University u/s 3 & 12B of the UGC Act, 1956 vide Government of India Notification No.F.9-19/2000-U.3 (A)]

Accredited A* Grade by NAAC (3rd Cycle)

Placed in 'A' Category by MoE (GoI)

POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

D.M. CARDIAC ANESTHESIOLOGY

Time: 3 Hours

Max. Marks: 100

PAPER – IV

Q.P. Code: 1528

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Enlist mode of mechanical ventilation. Discuss differences between volume controlled ventilation (VCV) and pressure controlled ventilation (PCV) modes in details. (2+4+4)
2. Enumerate causes of pleural effusion in cardiac surgical ICU. Write a note on its diagnosis and treatment in cardiac surgical unit. (3+3+4)
3. Discuss the differences between inotropes and indicators. Add a note on their use in hemodynamic optimization of post-operative cardiac surgical patients. (5+5)
4. Give an overview of functioning of LV assist devices. Discuss complications associated with LVADS. (5+5)
5. Define cyanotic spell (tet spell). Enumerate precipitating factors of cyanotic spell and its management in a patient with Tetralogy of fallot. (4+2+4)
6. Enlist the basic Focus Assessed Trans-thoracic Echo (FATE) views. Write ECHO characteristics of cardiogenic shock using FATE protocol. (4+6)
7. Discuss bedside lung ultrasound in emergency (BLUE) protocol of lung ultra sound. Discuss BLUE points and views of normal lung. (4+6)
8. Discuss the pre-operative evaluation and optimization of cardiac transplant recipient. (5+5)
9. Discuss the indications of Impella device insertion. Add a note on the role of anesthesiologist in its placement. (4+6)
10. Write a note on 2023 American Heart Association Focused Update on Adult Basic Life Support during Cardiopulmonary Resuscitation (AHA/ACC ACLS Guidelines).

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POST-DOCTORAL DEGREE EXAMINATION – FEBRUARY 2026

M. Ch. PAEDIATRIC SURGERY

Time: 3 Hours

Max. Marks: 100

PAPER – IV

Q.P. Code: 1532

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

ESSAY QUESTIONS:

10 X 10 = 100

1. Discuss the role of Minimally Invasive Surgery (MIS) in the management of blunt abdominal trauma in pediatric cases. Add a note on blunt trauma to the pancreas. (5+5)
2. Discuss various USG guided regional anaesthesia for abdominal and thoracic surgery. Add a note on its indications & limitations. (5+5)
3. Discuss the gender assignment of a child with ambiguous genitalia and the ethical issues involved with it. (5+5)
4. Explain the underlying pathophysiology of obstructive hydrocephalus. How does ETV helps in managing obstructive hydrocephalus? (5+5)
5. Explain the role of cryotherapy and laser therapy in the management of pediatric conditions. (5+5)
6. Explain the recent advances in the management of Necrotizing Enterocolitis (NEC) in premature infants, including surgical and non-surgical approaches. (6+4)
7. Discuss the surgical management of congenital limb deformities, clubfoot and Developmental Dysplasia of the Hip (DDH). (4+3+3)
8. Discuss the role of stem cell therapy in pediatric surgical conditions. Add a note on limitations of stem cell therapy. (5+5)
9. Discuss the normal process of skull sutural development and the pathophysiology of craniosynostosis. (5+5)
10. Describe the recent advances in management of pediatric burns.
