

RADIODIAGNOSIS

PAPER – I

Time : 3 hours
Max. Marks : 100

RDG/D/12/40/I

Attempt all questions in order.
Each question carries 10 marks.

1. Enumerate the causes of superior vena cava syndrome in an adult. Briefly describe the role and findings of various imaging modalities in a case of central bronchogenic carcinoma. 2+8
2. Describe various HRCT lung findings seen in interstitial lung disease with the help of diagrams. Describe HRCT features of usual interstitial pneumonia. 6+4
3. Enumerate various causes of respiratory distress in new born. Briefly describe imaging findings in congenital lobar emphysema and pulmonary sequestration. 2+(4+4)
4. Enumerate the causes of hemoptysis in an adult patient. Briefly discuss the indications, techniques and complications of radiological interventions in this condition. 2+(2+4+2)
5. Enumerate causes and briefly describe the role of imaging in diagnosis and management of Thoracic Aortic Aneurysm in a patient below the age of forty years. 2+4+4
6. Enumerate the radiographic features of enlarged right atrium and enlarged left atrium. Briefly describe lung field changes in a case of mitral stenosis. (2+3)+5
7. Briefly describe the anatomy of pericardium. List various causes and imaging findings in a case of constrictive pericarditis. 2+(2+6)
8. List various indications of MRI examinations in obstetrics. Outline various sequences used along with their rationale. Briefly describe MRI findings in two conditions presenting as obstetric emergencies. 2+2+(3+3)
9. List various causes of post menopausal bleeding. Briefly describe the role of various imaging modalities highlighting their advantages and pitfalls. Describe the MRI findings in a case of carcinoma cervix. 2+4+4
10. Enumerate the causes of hematuria in a fifty year old male patient. Briefly discuss the role of various imaging modalities in diagnosis and staging of renal cell carcinoma 2+(4+4)

RADIO DIAGNOSIS

PAPER – II

Time : 3 hours
Max. Marks : 100

RDG/D/12/40/II

Attempt all questions in order.
Each question carries 10 marks.

1. Enumerate the causes of mechanical small bowel obstruction in an adult. Describe the differentiating features of small bowel and large bowel obstruction on plain radiography. Briefly discuss the role of CT in mechanical small bowel obstruction. 3+2+5
2. Briefly describe the etiopathology and imaging findings of ileocecal tuberculosis. Discuss the features that are useful to differentiate it from Crohn's disease. (2+5)+3
3. Enumerate various causes of acute pancreatitis. Briefly discuss various terms used in description of imaging findings of acute pancreatitis and indicating its severity. 2+(6+2)
4. Enumerate the causes of ring enhancing lesions of brain parenchyma in MRI. Discuss the role of diffusion weighted imaging and MR spectroscopy in differentiation of various lesions. 2+(4+4)
5. Enumerate the causes of enlarged jugular foramen. Describe the imaging findings and role of interventional radiology in management of glomus jugulare tumor. 2+(5+3)
6. Enumerate the causes of cerebral venous thrombosis. Describe CT and MR findings of cerebral venous thrombosis. 2+(4+4)
7. List the causes of posterior scalloping of vertebrae. Describe skeletal changes seen in von Recklinghausen's disease. 2+8
8. Enumerate various causes of hemolytic anemia. Describe the imaging findings in a case of thalassemia major. Briefly discuss its differential diagnosis from sickle cell anemia. 2+5+3
9. Enumerate various indications of orbital ultrasound. Discuss the role of ultrasound and Color Doppler in a case of white reflex in a child. 2+(4+4)
10. Describe the imaging features of juvenile nasopharyngeal angiofibroma. Discuss the role of radiological intervention in its management. 6+4

RADIODIAGNOSIS

PAPER – III

Time : 3 hours

Max. Marks : 100

RDG/D/12/40/III

Attempt all questions in order.

Each question carries 10 marks.

1. Briefly describe the physical principle of radiofrequency ablation. Enumerate its applications. Discuss the role of radiofrequency ablation in management of osteoid osteoma. 2+2+6
2. Enumerate various indications of upper gastrointestinal endoscopic sonography. Briefly discuss its role in evaluation of pancreatic pathologies outlining the advantages & disadvantages. 2+8
3. Describe the physical principles of PET-CT. Discuss the role of computed tomography and PET-CT in diagnosis and post-treatment evaluation of lymphoma. 2+(4+4)
4. List the indications of hepato-biliary scintigraphy in children and adults. Describe briefly the principle, technique and findings on scintigraphy in a case of neonatal jaundice. 2+(2+2+4)
5. Enumerate various causes and differentiating features of hyper-intense lesions of the spinal cord on T₂ weighted M.R.I. 2+8
6. Briefly discuss the development of midgut. Describe the imaging findings of midgut malrotation and midgut volvulus on various imaging modalities. 3+(3+4)
7. Briefly describe the components of BIRAD system used for reporting of mammograms. Describe the indications and findings of various breast lesions on MRI. 4+(2+4)
8. Enumerate various causes of female infertility. Describe the role of hysterosalpingography and MRI in their diagnosis. 2+(4+4)
9. Discuss the role of imaging in uremia, citing the specific role and limitation of conventional radiography, sonography, CT, MR & renal scintigraphy. 2x5
10. Describe the physical principles of computed radiography and digital radiography. Briefly discuss their advantages and disadvantages. 3+3+(2+2)

RADIODIAGNOSIS

PAPER – IV

Time : 3 hours
Max. Marks : 100

RDG/D/12/40/IV

Attempt all questions in order.
Each question carries 10 marks.

1. Describe the arterial anatomy of carotid vascular system with the help of labeled diagrams. Discuss the role of ultrasound and color Doppler imaging in evaluation of extracranial carotid occlusive disease. 2+(2+6)
2. Describe the segmental anatomy of liver on cross sectional imaging. Discuss the role of triple phase CT in differentiating focal lesions in cirrhotic liver. 4+6
3. Briefly discuss the pathophysiology of osteomalacia. Describe the radiological findings in renal osteodystrophy. Enumerate the findings that help in differentiation from primary hyperparathyroidism. 3+4+3
4. Describe the construction of an X-ray tube with the help of a labeled diagram. Discuss the mechanism of production of X-rays. Enumerate the properties of X-ray. 3+4+3
5. Briefly describe the etiopathogenesis of choledochal cyst. Enumerate various types of choledochal cyst. Discuss the role of imaging in Caroli's disease. 2+3+5
6. Enumerate the indications of MDCT coronary angiography. Describe the methods to reduce the radiation dosage to patients during performance of MDCT coronary angiography. 2+8
7. Write short notes on: 5+5
 - a. Management of severe contrast reaction.
 - b. Nephrogenic systemic fibrosis.
8. Write short notes on: 3+3+4
 - a. Photoelectric effect and its role in production of radiographic image
 - b. Thermoluminescent dosimeter
 - c. Mammographic x-ray tube
9. Write short notes on: 5+5
 - a. Focused abdominal sonography for trauma
 - b. Pressure Injector
10. Write short notes on: 5+5
 - a. PC – PNDT Act
 - b. Conventional lead apron and zero lead apron.
