

RADIO DIAGNOSIS
PAPER-I

TIME: 3 HOURS
MAX. MARKS: 100

RDG/D/18/40/I

IMPORTANT INSTRUCTIONS

- This question paper consists of 10 questions divided into Part "A" and part "B", each part containing 5 questions.
- Answers to questions of part A and part B are to be strictly attempted in separate answer sheet(s) and the main + supplementary answer sheet(s) used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheet(s) of part B or Vice versa shall not be evaluated. -
- Answer sheets of Part A and Part B are not to be tagged together.
- Part A and Part B should be mentioned only on the covering page of the respective answer sheets.
- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write Short notes on:

PART A

1. Enumerate the various causes of bilateral T2 hyper intense lesions in basal ganglia. Describe the neuroimaging findings in Wilson's disease. 4+6
2. a) Role of magnetic resonance imaging in head injury. 5 + 5
b) Role of diffusion weighted imaging in intracranial infections.
3. a) Draw a labelled diagram of a coronal section through the "cavernous sinus". 5 + 5
b) Discuss the differential diagnosis of cavernous sinus lesions.
4. Draw a labelled diagram depicting the normal anatomy of orbit. Discuss the imaging findings of orbital pseudotumour and thyroid ophthalmopathy. 5+5
5. a) Computed tomographic and magnetic resonance imaging findings in mycotic sinusitis. 5 + 5
b) Imaging features of orbital involvement in Neurofibromatosis type 1.

P.T.O.

RADIO DIAGNOSIS
PAPER-I

Please read carefully the Important instructions mentioned on Page '1'

- Answers to questions of Part A and part B are to be strictly attempted in separate answer sheets and the main + supplementary answer sheets used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheets of Part B or vice versa shall not be evaluated.

PART B

6. Depict the anatomy of maxillary sinus using a labelled diagram. Discuss the role of imaging in the diagnosis of mucocele of maxillary sinus. 5 + 5
7. a) Explain the role of HRCT temporal bone and MRI in the work-up of a case of congenital sensory neural hearing loss (SNHL) for a possible cochlear implant. 4+6
b) Enumerate the key CT imaging features which must be commented upon from the perspective of a surgeon about to undertake a cochlear implant.
8. Explain what you understand by the term BIRADS. Enumerate the indications of magnetic resonance mammography. Explain the technique of magnetic resonance mammography. 3+2+5
9. Enumerate the causes of osteoporosis. Discuss the role of plain radiography in the evaluation of skeletal manifestations of hyperparathyroidism. 4+6
10. a) Explain the role of plain radiography in various diseases of the joints. 5+5
b) What is the role of ultrasound of joints in the evaluation of a case of rheumatoid arthritis?

RADIO DIAGNOSIS
PAPER-II

TIME: 3 HOURS
MAX. MARKS: 100

RDG/D/18/40/II

IMPORTANT INSTRUCTIONS

- This question paper consists of 10 questions divided into Part "A" and part "B", each part containing 5 questions.
- Answers to questions of part A and part B are to be strictly attempted in separate answer sheet(s) and the main + supplementary answer sheet(s) used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheet(s) of part B or Vice versa shall not be evaluated.
- Answer sheets of Part A and Part B are not to be tagged together.
- Part A and Part B should be mentioned only on the covering page of the respective answer sheets.
- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write Short notes on:

PART A

1. Enumerate the causes of bilateral lung cysts in an adult and discuss the role of HRCT in the differential diagnosis. 5+5
2. Enumerate the causes of lobar collapse. Describe the various chest radiographic findings of left upper lobe and left lower lobe collapse. 5+5
3. Draw a line diagram to define the radiological anatomy of mediastinum. Discuss the differential diagnoses of anterior mediastinal masses based on computed tomography examination findings. 5+5
4. Enumerate the causes of bilateral upper lobe fibrosis. Discuss the HRCT findings in intrathoracic sarcoidosis. 4+6
5. Enumerate the various lines and tubes encountered on chest radiographs in patients admitted to the intensive care unit (ICU). Discuss the imaging findings in pulmonary oedema. 5+5

P.T.O.

RADIO DIAGNOSIS
PAPER-II

Please read carefully the important instructions mentioned on Page '1'

- Answers to questions of Part A and part B are to be strictly attempted in separate answer sheets and the main + supplementary answer sheets used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheets of Part B or vice versa shall not be evaluated.

PART B

6. a) Describe the technique of multi-detector CT pulmonary angiography (MDCTPA) in a suspected patient of acute pulmonary thromboembolism. 5+5
b) Enumerate the false positive and false negative CT Pulmonary Angiography (CTPA) findings which can influence the assessment in such a patient suspected with pulmonary thromboembolism.
7. a) Myocardial viability imaging. 5+5
b) Chest radiograph findings in mitral valve disease
8. a) Imaging features in Tetralogy of Fallot. 5+5
b) Imaging features in partial anomalous pulmonary venous drainage.
9. Enumerate the benign pulmonary tumours and discuss their differential diagnosis. 4+6
10. Outline the following using an algorithmic sequence: 5+5
a) Imaging approach in a patient with blunt trauma to chest.
b) Imaging approach in a patient with blunt trauma to abdomen.

RADIO DIAGNOSIS
PAPER-III

TIME: 3 HOURS
MAX. MARKS: 100

RDG/D/18/40/III

IMPORTANT INSTRUCTIONS

- This question paper consists of 10 questions divided into Part "A" and part "B", each part containing 5 questions.
- Answers to questions of part A and part B are to be strictly attempted in separate answer sheet(s) and the main + supplementary answer sheet(s) used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheet(s) of part B or Vice versa shall not be evaluated. -
- Answer sheets of Part A and Part B are not to be tagged together.
- Part A and Part B should be mentioned only on the covering page of the respective answer sheets.
- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write Short notes on:

PART A

1. ✓ Describe the role of conventional radiography and computed tomography in the evaluation of a suspected case of acute large bowel obstruction. 5+5
2. a) ✓ Imaging in esophageal motility disorders. 5+5
b) ✓ Imaging in post-operative stomach.
3. ✓ Enumerate the various causes of strictures in the small intestine. Describe the imaging findings in Crohn's disease of the small intestine. 5+5
4. a) ✓ Role of magnetic resonance imaging in the evaluation of hemochromatosis and iron overload states. 5+5
b) ✓ Role of sonographic and Doppler evaluation in a patient of portal hypertension.
5. ✓ Describe the technique of multiphasic CT scan study of liver. Discuss the imaging findings of hepatoma. 4+6

P.T.O.

RADIO DIAGNOSIS
PAPER-III

Please read carefully the important instructions mentioned on Page '1'

- Answers to questions of Part A and part B are to be strictly attempted in separate answer sheets and the main + supplementary answer sheets used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheets of Part B or vice versa shall not be evaluated.

PART B

- ✓ 6. Describe the indications, contraindications and technique of CT urography. 2+2+6
- ✓ 7. Describe the role of ultrasound, computed tomography and magnetic resonance imaging in the diagnosis and staging of endometrial carcinoma. 2+2+6
- ✓ 8. Describe the indications, contraindications, technique and complications of hysterosalpingography. 2+2+4+2
9. a) PCPNDT Act. 5+5
b) Ultrasound findings in a 12 week foetus with Down syndrome.
10. a) Imaging findings in abruptio placentae. 5+5
b) Imaging findings in molar pregnancy.

RADIO DIAGNOSIS
PAPER-IV

TIME: 3 HOURS
MAX. MARKS: 100

RDG/D/18/40/IV

IMPORTANT INSTRUCTIONS

- This question paper consists of 10 questions divided into Part "A" and part "B", each part containing 5 questions.
- Answers to questions of part A and part B are to be strictly attempted in separate answer sheet(s) and the main + supplementary answer sheet(s) used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheet(s) of part B or Vice versa shall not be evaluated.
- Answer sheets of Part A and Part B are not to be tagged together.
- Part A and Part B should be mentioned only on the covering page of the respective answer sheets.
- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write Short notes on:

PART A

- ✓ 1. Discuss the physical principles of the ultrasound contrast media. Enumerate the safety issues and recommendations regarding their clinical use. 5+5
- ✓ 2. Define 4DCT technique and enumerate the situations in which it is used and discuss in detail the technique of 4DCT of parathyroid. 2+3+5
- ✓ 3. Discuss the factors which tend to affect the image quality on a computed tomography (CT) scan. Describe the diverse radiation dose reduction strategies which can be employed while carrying out a thoracic CT scan. 5+5
- ✓ 4. Enumerate the various post-processing techniques which can be used during a thoracic computed tomography (CT) examination. State the clinical utility of each of these post-processing techniques citing examples. 5+5
- ✓ 5. Enumerate the various pulse sequences used in magnetic resonance imaging. State the clinical utility of each pulse sequence citing examples. 5+5

P.T.O.

RADIO DIAGNOSIS
PAPER-IV

Please read carefully the important instructions mentioned on Page '1'

- Answers to questions of Part A and part B are to be strictly attempted in separate answer sheets and the main + supplementary answer sheets used for each part must be tagged separately.
- Answers to question(s) of Part A attempted in answer sheets of Part B or vice versa shall not be evaluated.

PART B

6. Describe the basic principles of PET-CT. Discuss the advantages and disadvantages of PET-MRI over PET-CT. 5+5
7. Enumerate the various liquid embolic agents used in interventional Radiology. Discuss the role of interventional Radiologist in the management of Cerebral Arteriovenous malformations. 4+6
8. Discuss the indications, pharmacokinetics, and method of iodine-131 metaiodobenzylguanidine scintigraphy. 3+3+4
9. Describe the basic physical principles, indications, contraindications and technique of radiofrequency ablation of liver tumours. 3+2+2+3
10. a) Kappa measure (in terms of statistical analysis of medical data). 5+5
b) The Receiver Operating Characteristics (ROC).
