RADIODIAGNOSIS

PAPER - I

RDG/J/13/40/I

Time : 3 hours
Max. Marks : 100

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.**
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PART A

1. Define pulmonary oedema. What is its pathophysiology? Enumerate its causes. Describe the plain film radiographic findings in pulmonary edema. 1+2+3+4

2. Write imaging findings of the following: 4+3+3
   a. Bronchial carcinoid
   b. BOOP
   c. McLeod's Syndrome

3. Define sarcoidosis. What are the various stages of thoracic sarcoidosis? Discuss the radiological manifestations of thoracic sarcoidosis. 2+2+6

4. Enumerate the causes of left atrial enlargement. Discuss its findings on a chest radiograph. What other imaging techniques will be useful in making the diagnosis? Briefly highlight the significance of each. 2+3+2+3

5. What is Eisenmenger Syndrome? Enumerate the conditions that may produce this syndrome. Discuss its key radiological features. 2+2+6

P.T.O

RADIODIAGNOSIS

PAPER - I

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

PART B

6. What do you understand by the term "extramedullary hematopoiesis"? Enumerate its causes. Discuss its plain film and cross sectional imaging findings. 2+2+(3+3)

7. What is "placenta accreta"? What are its types? Which imaging modalities would be useful in its diagnosis? Briefly describe the imaging features of each imaging modality? 1+1+2+6

8. Enumerate the factors that enhance the risk of ectopic pregnancy. What would be its classic clinical signs? Discuss the role of ultrasonography in its diagnosis highlighting the key imaging features. 2+2+6

9. Define contrast nephropathy. Who are the patients at risk? What is the mechanism at work? Outline its time course. What are the key recommendations to check its occurrence? 2+2+2+2+2

10. List the anatomical sites which may become afflicted in renal tuberculosis. Discuss their radiological features in brief. 2+8

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RADIODIAGNOSIS

PAPER - II

RDG/J/13/40/II

Time : 3 hours
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PART A

1. What is osteoporosis? Enumerate causes of osteoporosis. Discuss any three imaging modalities currently in vogue for assessment of bone mineral density. 2+2+6

2. Classify neural tube closure defects of brain. Briefly describe types of Arnold Chiari malformation and discuss their imaging findings. 2+2+6

3. What are the key clinical features, common sites and radiological findings in Ewing's sarcoma? Discuss its differential diagnosis in brief. (2+2+4)+2

4. Discuss the etiology and characteristic imaging findings in 'ring-enhancing lesions' of the brain. 3+7

5. What are the common sellar and parasellalr lesions? Describe the key radiological findings in craniopharyngioma on skull radiographs, CT and MR imaging. 4+(2+2+2)

P.T.O

RADIODIAGNOSIS

PAPER - II

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

PART B

6. Enumerate the causes of a solitary lytic lesion in the skull. Describe the distinguishing radiological features of any three. 4+6

7. Enumerate the common causes of obstructive jaundice. Discuss the role of various imaging modalities in its diagnosis. 2+8

8. The Child Welfare Board has referred an accused to you for estimation of age. Being a radiologist, how would you carry out this assignment? Discuss in brief the variables that can affect the estimated age. 6+4

9. Discuss the technique and role of CT in evaluation of acute pancreatitis. 2+8

10. A 40 year old male presents with a lump in the right iliac fossa. What would be your approach as a radiologist to help come to a diagnosis? Discuss the characteristic radiological features of any three pathologies, presenting with right iliac fossa lump. 1+9

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FINAL EXAM
JUNE 2013

NATIONAL BOARD OF EXAMINATIONS

RADIODIAGNOSIS

PAPER - III

RDG/J/13/40/III

Time : 3 hours
Max. Marks : 100

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PART A

Write short notes on:

1. Define strain & shear wave elastography. Discuss its role in breast, prostatic and muscoloskeletal lesion. Compare its sensitivity and specificity with MR elastography. — 2+6+2

2. Enumerate causes of painful limp in a child unable to bear weight. Briefly discuss role of plain X-ray, arthrography, US, CT, MRI & scintigraphy in arriving at diagnosis. — 2+2+1+1+1+2+1

3. a. CT Vs MR Urography. — 5+5
   b. CT Vs MR Enteroclysis.

4. Discuss the role of contrast enhanced MR Imaging and organ specific MR contrast media. — 3+7

5. a. Radio isotope scanning of the skeletal system. — 5+5
   b. Clinical applications of 3D & 4D ultrasound.

P.T.O

RADIODIAGNOSIS

PAPER - III

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

PART B

6.	Draw a neat line diagram of perinephric space including its relationship with other spaces. Write CT features of perinephric abscess and urinoma.	4+(3+3)
7.	Discuss the role of plain X-ray, CT and MRI in cases of lower cervical spinal trauma.	3+4+3
8.	Discuss the role of scintigraphy in cardiac imaging with special emphasis on myocardial perfusion and viability.	10
9.	Discuss the recent advances in MDCT. What are the various dose reduction techniques in MDCT? Mention average radiation dose received for common examinations using MDCT.	4+4+2
10.	Discuss briefly the pathophysiology of pulmonary embolism. Give in detail the imaging modalities for diagnosis of this entity and their relative merits & demerits.	4+(4+1+1)

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RADIODIAGNOSIS

PAPER - IV

RDG/J/13/40/IV

Time : 3 hours
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PART A

Write short notes on:

1. Describe the M.R.Anatomy of the shoulder joint. Briefly state the MR sequences you would employ to delineate various lesions of the shoulder joint. 4+6

2. Briefly discuss with diagram the anatomy of Circle of Willis. What are the causes of subarachnoid hemorrhage? Discuss the role of imaging in a case of subarachnoid hemorrhage. 3+3+4

3. a. Ossification of elbow joint and its clinical significance. 5+5
   b. Fusion imaging

4. a. Principle of digital radiography. 5+5
   b. Clinical applications of molecular imaging

5. a. MR Artefacts 5+5
   b. CT Artefacts

P.T.O

RADIODIAGNOSIS

PAPER - IV

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

PART B

6. a. Rare Earth screen
   b. Green Sensitive Film
   c. Dual energy substractions
   3+3+4

7. Define Roentgen. Mention various recommendations of maximum permissible dose for patients and staff members of the Radiology department. 2+(4+4)

8. Enumerate various interactions of X-ray photons with matter. Discuss any two in detail with their significance in Radiology department. 3+(3+4)

9. Discuss the following: 3+3+4
   a. Bold Imaging
   b. Genetic Screening
   c. PACS in Radiology

10. Describe AERB guidelines for X-ray and CT installation. 5+5

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