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 questions of Part ‘A’ attempted in answer sheet(s) of Part ‘B’ or vice versa shall not be evaluated.
- Answer sheet(s) 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 sheet(s).
- 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.

PART A

Write short notes on:

1. a) What is scatter radiation? How does it affect radiographic image quality? (1+2)+7
   b) Methods to reduce scatter radiation.

2. a) Enumerate the types of digital radiography. Describe each one briefly. 4+6
   b) Advantages and limitations of digital radiography compared with conventional film screen radiography.

3. a) Principles and techniques of dual energy CT. (3+3)+4
   b) Clinical applications of dual energy CT.

4. Principles and techniques of ultrasound elastography along with its clinical applications. 2+4+4

5. a) Define contrast induced nephropathy (CIN). 1+(5+4)
   b) Conditions predisposing to CIN and the precautions to be taken to avoid CIN.