

**RADIODIAGNOSIS**  
**PAPER-IV**

TIME: 3 HOURS  
MAX. MARKS: 100

RDG/J/20/40/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. a) Rotating anode X-ray tube and its advantages. 5+5  
b) X-ray beam restricting device and their uses.
2. Classify water soluble iodinated contrast media. Describe various adverse reactions to iodinated contrast media. Describe steps in the diagnosis and management of contrast media induced anaphylaxis. 2+3+(2+3)
3. Enumerate the principles of Computed Radiography (CR) and Digital Radiography (DR). What are their advantages and disadvantages? (3+3)+(2+2)
4. a) Describe the principle and technique of phase contrast MR angiography. 2+2+2+2+2  
b) Discuss its advantages, limitations and clinical applications.
5. a) Applications of dual energy CT. 5+5  
b) Ultrasound artifacts.

**P.T.O**

**RADIODIAGNOSIS**  
**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.  | Classify the commonly used embolizing agents. Discuss their advantages, disadvantages and clinical applications.  | 3+(2+2+3) |
| 7.  | What is plagiarism in scientific writing? What are the various common types of plagiarism? Describe, how plagiarism can be detected in scientific writings. Briefly mention a few measures to avoid plagiarism. | 1+4+2+3   |
| 8.  | a) Predatory journals and publishing.<br>b) Techniques of randomization of samples in a research study.   | 5+5       |
| 9.  | a) PC-PNDT Act and its applications.<br>b) TLD Badge: Principles and uses.  | 5+5       |
| 10. | a) Artificial Intelligence in radiology.<br>b) PET MRI.   | 5+5       |

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