

**RADIODIAGNOSIS**

PAPER – IV

RDG/J/17/40/IV

Time : 3 hours

Max. Marks : 100

**Important instructions:**

- 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:

1. a) Define the PC & PNDT Act, its objectives, its target bodies and requirements. 5+5  
b) Enumerate the essential information to be filled in Form F and the documents to be attached along with.
2. a) Delineate the boundaries of the middle cranial fossa. 4+6  
b) Enumerate the anatomical structures found in the middle cranial fossa.
3. a) Enumerate the constituents of the ultrasound gel. 3+3+4  
b) Identify the usefulness of each constituent.  
c) Explain the principle behind the usage of ultrasound gel in sonographic imaging.
4. With reference to diagnostic imaging, explain the following terms stating their clinical significance: 5+5  
a) Signal to noise ratio(SNR)  
b) Shear wave elastography
5. a) Name the essential drugs that must be kept in readiness in a radiology room to tide over the contrast reactions caused by iodinated contrast agents. 3+7  
b) State their usage in diverse contrast reaction related emergencies citing their dosage and mode of administration.
6. a) What is the role of nuclear medicine imaging techniques in the investigation of neuroendocrine tumours? 7+3  
b) Pitfalls of these techniques.
7. a) Sensitivity, specificity, positive predictive value and negative predictive value of a diagnostic test. 5+5  
b) Quote an example using these values for any radiological test.

**P.T.O.**

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| 8. Basic principles of Dual Energy Computed Tomography and its clinical applications in abdominal imaging.  | 4+6 |
| 9. Enumerate the current interventional radiology techniques being employed in the management of acute massive pulmonary thromboembolism. Outline the merits and limitations of each. | 4+6 |
| 10. Recent developments in non-invasive clinical lymphatic imaging techniques capable of visualizing the central lymphatic anatomy and flow dynamics.                                 | 10  |

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