**NUCLEAR MEDICINE**  
**PAPER – III**

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. Basic principles of internal dosimetry and briefly enumerate various anthropometric phantoms.  
(6+4)

2. a) Dose constraint  
b) Dose limits  
c) Stochastic effects of radiation  
d) ALI (Annual Limit of Intake)  
(2.5x4)

3. Design a two-bed high-dose radiiodine therapy Isolation Ward as per AERB norms.  
(10)

4. a) Autonomously Functioning Thyroid Nodule (AFTN).  
b) Diffuse Large B-Cell Lymphoma.  
(5+5)

5. Management of differentiated thyroid cancer patient with spinal metastasis.  
(10)

6. An elderly female with long-standing multinodular goiter has recently developed atrial fibrillation, How will you proceed with investigations?  
(10)

7. a) 90Y-Rituximab.  
b) 223Ra – Chloride.  
(5x2)

8. Ideal Radionuclides for PRRT.  
(10)

(10)

10. How to choose the particular radiopharmaceutical for a particular joint for radiosynevectomy?  
(10)

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POSESSION / USE OF CELL PHONES OR ANY SUCH ELECTRONIC GADGETS IS NOT PERMITTED INSIDE THE EXAMINATION HALL.