

Roll No.

Total No. of Pages : 02

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**B.Sc. (Radiotherapy Technology) (Sem.-6)**  
**MANAGEMENT OF RADIOTHERAPY EQUIPMENTS &**  
**SHIELDING OF ALL CRITICAL ORGANS INCLUDING**  
**GENITALS**

Subject Code : BSRT607-19

M.Code : 91769

Date of Examination : 12-07-22

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

**1. Write briefly :**

- a) What is hot loading and after loading?
- b) Define pocket dosimeter.
- c) What are the various types of brachytherapy implant?
- d) What do you know about Geiger-Muller Detector?
- e) Write the steps of beam directing.
- f) Define Proportional Counter.
- g) Mention the limitations of telecobalt.
- h) Name various site-specific shielding.
- i) What is magnetron and give its significance.
- j) Which kind of radiations are produced by LINAC?

### SECTION-B

2. Discuss in detail about technical specifications for cobalt-60 teletherapy units.
3. Write a brief note on components of LINAC.
4. Explain about HDR brachytherapy afterloads.
5. Draw a well labelled energy level diagram for the decay of Cobalt-60 nucleus with explanation.
6. Write down the physical properties of x-radiation.

### SECTION-C

7. Write a detailed note on eye shielding and lung shield.
8. What are the major limitations of using telecobalt? Discuss its clinical relevance.
9. Explain in detail about the clinical significance of brachytherapy with examples of equipments for technical specifications.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**