

# SHRI RAMSWAROOP MEMORIAL UNIVERSITY

## End Semester Examination (2021-22)-Odd Semester

Diploma (BM) – III Year (V Sem)

Course Name: Principle of Radiological Equipments

Code: DBT5001

Time: 02 Hours

Max Marks: 60

University Roll No.

(To be filled by the Student)

**Note: Please read instructions carefully:**

- The question paper has 03 sections and it is compulsory to attempt all sections.
- All questions of Section A are compulsory; questions in Section B and C contain choice.

<b>Section A: Very Short Answer Type Questions</b>		<b>BL</b>	<b>CLO</b>	<b>Marks (20)</b>
<b>Attempt all the questions.</b>				
1.	What is scintillator detector?	BL1	CLO2	02
2.	Define arch therapy.	BL1	CLO3	02
3.	What is the wavelength range of x-ray?	BL1	CLO1	02
4.	Define sievert.	BL1	CLO1	02
5.	What is pulsed progressive fluoroscopy?	BL1	CLO2	02
<b>Section B: Short Answer Type Questions</b>		<b>BL</b>	<b>CLO</b>	<b>Marks (30)</b>
<b>Attempt any 03 out of 06 questions.</b>				
1.	Explain the x-ray production process and source of x-ray with rotating anode tube.	BL2	CLO1	10
2.	Describe the application of high voltage X-ray machine. What is required dosage rate in radiotherapy procedure?	BL2	CLO4	10
3.	Relate angiography and cardiac catheterization technique and also explain angiography process in different therapeutic application.	BL2	CLO3	10
4.	Discuss the different types of X-ray unit.	BL2	CLO4	10
5.	Describe the different physical parameters for x-ray detector.	BL2	CLO1	10
6.	What is fluoroscopy? Discuss the applications and limitations of this technique.	BL2	CLO2	10
<b>Section C: Long Answer Type Questions</b>		<b>BL</b>	<b>CLO</b>	<b>Marks (20)</b>
<b>Attempt 01 out of 04 questions.</b>				
1.	Elaborate the basic x-ray machine and its six sub-systems with the help of block diagram.	BL6	CLO2	20
2.	Discuss the functions of medical linear accelerator machine and explain its subsystems with the help of block diagram.	BL2	CLO2	20
3.	Explain the digital angiographic machine using schematic diagram and describe its components.	BL2	CLO3	20
4.	Discuss the contraction of cobalt machine and its components.	BL6	CLO4	20