



The West Bengal University of Health Sciences
B.Sc. Radiology and Imaging Technology Part-I
August- September, 2025 Examination

Subject : Radiography Equipment, Maintenance and Quality Control
 Paper : IV

Full Marks : 80
 Time : 3 hrs.

Group – A

1. Answer **any four** questions of the following :

- a) What is fluoroscopy? Write the function of fluoroscopic image monitoring process. 2+8
- b) Why does the X-ray circuit require rectification? Match the power sources with the voltage ripple. 5+5
- c) Identify three photostimutable phosphors. How does the latent image formed in computed radiography? 2+8
- d) Briefly explain the function and working principle of different components of X-ray tubes with diagram. 10
- e) Write the difference between:
 i) Portable X-ray. 5+5
 ii) Mobile X-ray.

Group – B

2. Answer **any six** question of the following :

- a) What are the five basic densities seen on an X-ray image? How do they appear? 3+2
- b) State Ohm's law and describe its effect on electric circuits. 5
- c) Why are arcing and tube failure no longer major problems in modern X-ray tube design? 5
- d) What is the principal advantage of SPR over tiled CCDs to be used in DR? 5
- e) How does a rectifier convert AC to DC current? 5
- f) Write the five properties of X-ray. 5
- g) Explain the rotating anode X-ray tube with diagram. 5

Group – C

3. Answer **any five** question of the following :

- a) What are the components of mobile radiography? 5 x 2
2
- b) What happens to most of the energy entering the X-ray tube? 2
- c) What is the single screen usually used in mammography? 2
- d) How are the frequency and wavelength related? 2
- e) What is the reason why an unexposed border is shown on the edge of the radiography? 2
- f) What is panoramic radiography? 2