

RADIOGRAPHY SEMICOUNDUCTOR PUZZLE

UNIT - 5

TOPIC - SEMICONDUCTOR

TOTAL MARKS - 10 MARKS

Puzzle: Sequence Scramble (Order the Events)

The X-ray detection in a semiconductor detector is a chain of events, but the Disruptor scrambled

them! Arrange the steps in the correct order to capture the image signal.

Select the correct sequence by choosing the letter (A-D) of the proper order.

Scrambled Steps:

- i. Charges are collected at pixel electrodes, inducing a signal
- ii. Electron-hole pairs are generated through ionization
- iii. X-ray photons enter and interact with the semiconductor material
- iv. The induced signal is processed to form the digital image
- v. The applied electric field separates and drifts the charges

Options: A) iii, ii, v, i, iv B) iii, v, ii, i, iv C) v, iii, ii, iv, i D) ii, i, iii, v, iv

Rules: Choose the correct sequence (A-D).

Clue Hint: Start with the photon's entry and end with the image's creation—follow the charge flow!

RUBRICS:

Criterion	Marks (out of 10)
Accuracy	4
Logical reasoning / Applying	3
Conceptual understanding	2
Presentation	1
Total Marks	10 Marks