

RADIOGRAPHY TYPES OF GRIDS PUZZLE

UNIT - 7

TOPIC - TYPES OF GRIDS

TOTAL MARKS - 10 MARKS

Puzzle: Radiology Coliseum (Case-Based Battle Arena)

As a radiology guardian in a busy ER, evaluate a 55-year-old obese patient requiring an urgent abdominal X-ray for suspected bowel obstruction. The setup involves a portable X-ray unit with potential for tube angulation, high scatter due to patient size, and need for optimal contrast without excessive dose. Options:

- Parallel grid: Lead strips aligned parallel, tolerant to minor misalignment but risks cutoff at edges.
- Focused grid: Lead strips converged to focal spot, maximizes scatter reduction but requires precise centering.
- Crossed grid: Dual perpendicular layers for maximum scatter absorption, no tube tilt allowed.
- Stationary grid (non-moving): Fixed position, may show grid lines on image unless high ratio.

Choose the best type of grid and justify your selection in detail, considering factors like image quality, patient radiation dose,

alignment challenges, scatter reduction efficiency, and potential artifacts or disadvantages.

RUBRICS:

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