

**Test Bank for Merrills Atlas of
Radiographic Positioning and Procedures
- 3-Volume Set 16th Rollins**

Test Bank - Chapter 01

Q: By which organization are the Practice Standards for Medical Imaging and Radiation Therapy written and maintained?

- A. American Registry of Radiologic Technologists
- B. American Medical Association
- C. American Society of Radiologic Technologists (Correct)**
- D. Joint Commission on Education in Radiologic Technology

Q: By which organization are the Standards of Ethics for radiographers written and maintained?

- A. American Registry of Radiologic Technologists (Correct)**
- B. American Medical Association
- C. American Society of Radiologic Technologists
- D. Joint Commission on Education in Radiologic Technology

Q: Radiographic images of the hands, wrist, feet, and toes are routinely displayed with the digits in which position?

- A. Toward the ceiling (Correct)**
- B. Toward the floor
- C. Horizontal and pointed to the left
- D. Horizontal and pointed to the right

Q: With which frequency should the radiographic tabletop be cleaned?

- A. Only when visibly soiled
- B. Weekly
- C. Daily
- D. After every procedure/patient (Correct)**

Q: Which prevention method for the spread of microorganisms is the easiest and most convenient?

- A. Wearing PPE
- B. Following cough etiquette protocols
- C. Handwashing (Correct)**
- D. Proper handling of sharps

Q: Which abnormality would *not* affect the radiographic result and should *not* be recorded by the radiographer in the clinical history?

- A. Tattoos with ferrous pigments
- B. Freckles and moles (Correct)**
- C. Swelling or masses
- D. Surface scars

Q: Nervousness, discomfort, and fear are causes of which phenomenon?

- A. Voluntary motion (Correct)**
- B. Involuntary motion
- C. Imaging procedure failure

D. Image artifacts

Q: Through which action would radiographers control voluntary motion?

- A. Using a high kVp
- B. Increasing the length of exposure time
- C. Performing the examination in the recumbent position
- D. Giving clear instruction to the patient (Correct)**

Q: By which strategy can radiographers best control voluntary motion of infants and children?

- A. Providing clear instructions
- B. Performing the examination in the supine position
- C. Decreasing the length of exposure time (Correct)**
- D. Increasing the mA

Q: Which type of accessory equipment reduces the amount of scatter and off-focus radiation that reaches the image receptor?

- A. Lead shield
- B. Grid (Correct)**
- C. Sandbag
- D. Sponge

Q: Which information would *not* be included on all radiographic images?

- A. Right or left side marker
- B. Patient's name or ID number
- C. Radiographer's name (Correct)**
- D. Date of exam

Q: The metric conversion of 40 inches is how many centimeters?

- A. 16
- B. 18
- C. 90
- D. 102 (Correct)**

Q: Which image receptor general position is the most common?

- A. Diagonal
- B. Crosswise
- C. Lengthwise (Correct)**
- D. Vertical

Q: Which term denotes the central or principal beam of x-rays?

- A. Center beam (CB)
- B. Image beam (IB)
- C. Central ray (CR) (Correct)**
- D. Image receptor (IR)

Q: Which goal would be the general goal for central ray placement?

- A. Parallel with the structure of interest
- B. Perpendicular to the structure of interest (Correct)**
- C. Angled along the long axis of the part of interest
- D. Angled against the long axis of the part of interest

Q: Which term denotes the distance from the anode focal spot inside the x-ray tube to the image receptor?

- A. Collimation
- B. Source-to-image receptor distance (SID) (Correct)**
- C. Central ray (CR)
- D. Source-to-skin distance (SSD)

Q: Which factor is *not* affected by the SID used for a radiographic image?

- A. Spatial resolution
- B. Magnification of the anatomy in the image
- C. Patient dose
- D. Contrast resolution (Correct)**

Q: Which image receptor would be used in computed radiography IRs?

- A. Tethered solid-state digital detector
- B. Wireless flat-panel detector
- C. Cassette with film
- D. Photostimulable storage phosphor imaging plate (Correct)**

Q: Blood and body fluid recommendations are issued by which organization?

- A. Centers for Disease Control and Prevention (CDC) (Correct)**
- B. American Society of Radiologic Technologists (ASRT)
- C. American Registry of Radiologic Technologists (ARRT)
- D. The Joint Commission (TJC)

Q: Each radiology department must write age-specific competencies to meet the standards of which organization?

- A. Centers for Disease Control and Prevention (CDC)
- B. American Society of Radiologic Technologists (ASRT)
- C. American Registry of Radiologic Technologists (ARRT)
- D. The Joint Commission (TJC) (Correct)**

Q: Gonadal shielding can negatively impact exam efficacy was first stated in a position statement by which organization?

- A. American Association of Physicists in Medicine (AAPM) (Correct)**
- B. American College of Radiology (ACR)
- C. American Society of Radiologic Technologists (ASRT)
- D. National Council on Radiation Protection (NCRP)

Q: A fundamental responsibility of radiographers is to ensure that each radiation exposure upholds which concept?

A. As low as reasonably achievable (ALARA) (Correct)

B. As long as radiograph is acceptable (ALARA)

C. Acceptable limits allowed for radiographic attempts (ALARA)

D. As low as radiographically acceptable (ALARA)

Q: The source of radiation in an x-ray tube (the anode) *shall not* be closer than how many centimeters from the patient?

A. 30 (Correct)

B. 38

C. 40

D. 48

Q: Current NCRP recommendations state that the SSD *should not* be less than how many centimeters?

A. 30

B. 38 (Correct)

C. 40

D. 48

Q: Which physician is board certified to read or interpret x-ray examinations?

A. Hospitalist

B. Radiographer

C. Radiologist (Correct)

D. Surgeon

Q: Which term denotes restriction of the exposure field?

A. Collimation (Correct)

B. Filter

C. Shuttering

D. Central ray (CR)

Q: To which area must the exposure field be restricted?

A. Size of the image receptor

B. 2.5 cm (1 inch) of the image receptor size

C. Anatomy of interest (Correct)

D. 5 cm (2 inches) of the image receptor size

Q: Which side marker would be placed on the image receptor on the edge of the collimated field for a radiographic image of a patient with an injured right hand?

A. The left (L) marker on the left side of the patient's right hand

B. The right (R) marker on the right side of the patient's left hand

C. The left (L) marker on either side of the patient's hand

D. The right (R) marker on either side of the patient's hand (Correct)

Q: Which digital (DR) display feature is used to provide a black background around the original collimation edges?

- A. Collimation
- B. Compensation filters
- C. Filtration
- D. Shuttering (Correct)**

Q: Radiographs are usually oriented on the display monitor in which position?

- A. Anatomic (Correct)**
- B. Erect
- C. Supine
- D. True

Q: Hand radiographs are viewed from which perspective?

- A. Patient
- B. Radiographer
- C. X-ray table
- D. X-ray tube (Correct)**

Q: Radiology departments without appropriate equipment cannot perform examinations on patients who weigh more than how many pounds?

- A. 250 – 300
- B. 300 – 350
- C. 350 – 450 (Correct)**
- D. 500

Q: Radiographers who obtain additional education, clinical practice, and certification to provide advanced clinical imaging procedures are designated as which titles? *(Select two.)*
(Select all that apply.)

- A. Radiologist deputies (RD)
- B. Radiologist assistants (RA) (Correct)**
- C. Radiology practitioner assistants (RPA) (Correct)**
- D. Advanced radiography practitioners (ARP)

Q: Which pre-exposure breathing instructions for radiographic procedures are the most common? *(Select two.)*
(Select all that apply.)

- A. Rapid, shallow breaths
- B. Slow, deep breaths
- C. At the end of inspiration (Correct)**
- D. At the end of expiration (Correct)**

Q: Collimation of the x-ray beam provides which results? *(Select two.)*
(Select all that apply.)

- A. A decrease in radiographic contrast
- B. An increase in radiographic contrast (Correct)**
- C. A decrease of scatter radiation (Correct)**
- D. An increase of scatter radiation

Q: Which results would be found by an increase in SID? *(Select two.)*
(Select all that apply.)

- A. Decreased magnification (Correct)**
- B. Increased magnification
- C. Increased spatial resolution (Correct)**
- D. Decreased spatial resolution

Q: Which motions are considered involuntary? *(Select all that apply.)*
(Select all that apply.)

- A. Peristalsis (Correct)**
- B. Heartbeat (Correct)**
- C. Breathing
- D. Muscle spasm (Correct)**

Q: Which interactions with patients are essential? *(Select all that apply.)*
(Select all that apply.)

- A. Radiographers explain the procedure to be performed. (Correct)**
- B. Patients understand exactly what is expected. (Correct)**
- C. Radiographers must obtain clinical history and observe for abnormalities. (Correct)**
- D. Radiographers avoid conversation.

Q: It is a violation of the ARRT Code of Ethics and ASRT Practice Standards to collimate larger than the required radiation field size as the increased field size would result in which outcomes?
(Select all that apply.)
(Select all that apply.)

- A. Unnecessary patient exposure (Correct)**
- B. Increased scatter radiation (Correct)**
- C. Increased contrast resolution
- D. Decreased spatial resolution due to scatter (Correct)**

Q: Which facts are *true* regarding anatomic marker use? *(Select all that apply)*
(Select all that apply.)

- A. Marker should never obscure anatomy (Correct)**
- B. Marker should always be placed in the exposure field (Correct)**
- C. Annotation should be used whenever possible
- D. Marker should be placed on the edge of the collimation border (Correct)**

Q: When imaging obese patients, the radiographer should follow which suggestions? *(Select all that apply)*
(Select all that apply.)

- A. Use the jugular notch as a landmark. (Correct)**
- B. Never reference the patient's weight. (Correct)**
- C. Manually lift the patient.
- D. Prod the patient to find the landmarks such as the ASIS and iliac crest.

Q: Which variables are affected when imaging patients who are obese? *(Select all that apply)*
(Select all that apply.)

- A. Image quality (Correct)**
- B. Ability to transfer safely (Correct)**
- C. Ability to find positioning landmarks (Correct)**
- D. Interpersonal communication