



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(MRIT)-2022

Course Name – Clinical Radiography-Positioning Part I

Course Code - BMRITC302

(Semester III)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select the another name for the seventh cervical vertebra is
 - a) Atlas
 - b) Dense
 - c) Axis
 - d) Vertebra prominence
- (ii) Identify the correct option when taking an AP lumbar X-ray image, where should the CR be focused?
 - a) One inch over the iliac crest
 - b) One to two inch below the iliac crest
 - c) At the belly button
 - d) Halfway between anterior superior iliac spine and posterior superior iliac spine
- (iii) Choose the correct option for the ileum, ischium and pubis are the parts of
 - a) Small intestine
 - b) Humerus
 - c) Femur
 - d) Hip bone
- (iv) Identify osteoporosis is a bone disease that develops
 - a) when bone mineral density and bone mass decreases
 - b) when bone mineral density and bone mass increases
 - c) when bone mineral density increases
 - d) None of these
- (v) Identify the correct option, In a ward setting, what is the primary advantage of portable X-ray machines?
 - a) They produce higher-quality images
 - b) They are less expensive
 - c) They can be brought to the patient's bedside
 - d) They use less radiation
- (vi) Choose the correct option , Sir wilhelm conrad Roentgen discovered X-rays on
 - a) 8th November, 1895
 - b) 28th August, 1895
 - c) 8th November, 1825
 - d) 8th November, 1795
- (vii) Choose the correct option, X-rays have
 - a) Short wavelength
 - b) High frequency
 - c) Both (1) and (2)
 - d) Longest waverlength

- (viii) Choose the correct option, what is the purpose of collimation in mobile radiography?
- To enhance image contrast
 - To reduce radiation exposure to surrounding tissues
 - To speed up image acquisition
 - To adjust the X-ray tube voltage
- (ix) The ability to identify the bicipital groove of the humerus can be shown in
- PA view of shoulder
 - Lateral view of shoulder
 - Tangential projection
 - Axial view of shoulder
- (x) Identify which view is needed to see the joint space and compare the anatomy of the knee ?
- Knee AP
 - Knee Lateral
 - Both Knee AP weight bearing
 - None of these
- (xi) Choose the correct option, what is the primary purpose of a chest radiograph?
- To evaluate bone fractures
 - To assess abdominal organs
 - To examine the brain
 - To diagnose lung diseases
- (xii) Identify which view is done for the better evaluation of Transverse Patella fracture ?
- Skyline projection in sitting position
 - Skyline projection in prone position
 - Knee lateral
 - None of these
- (xiii) Identify, in which view of wrist joint the fracture of scaphoid is well demonstrated?
- PA
 - Lateral
 - PA with ulnar deviation
 - PA with radial deviation
- (xiv) Choose the correct central ray for the projection of L S Spine Flexion and Extension
- Directed perpendicular to a point 7.2cm anterior to the second lumbar spinous process at the level of the lower costal margin
 - Directed perpendicular to a point 7.5 cm posterior to the second lumbar spinous process at the level of the lower costal margin
 - Directed perpendicular to a point 7.5 cm anterior to the third lumbar spinous process at the level of the lower costal margin
 - Directed perpendicular to a point 7.2 cm posterior to the third lumbar spinous process at the level of the lower costal margin
- (xv) What safety measures should be taken when using mobile radiography equipment to protect healthcare workers and patients from radiation exposure? Choose the correct option,
- Using latex gloves
 - Wearing lead aprons
 - Turning off the equipment
 - Wearing safety goggles

Group-B

(Short Answer Type Questions)

3 x 5=15

- What are the common indications for chest X-ray? Explain positioning, centering, technical factors for chest PA view. (3)
- Explain indication, positioning, centering, technical factor, structure seen & evaluation criteria of "Y"-view ? (3)
- Explain 10 days' rule. (3)
- Write down the indication, patient positioning, centring and exposure factors for Cervical Spine Extension view. (3)
- Write down the indication, patient positioning, centring and exposure factors for frog's view (3)

OR

Write down the indication, patient positioning, centring and exposure factors for pelvis AP view. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Describe in detail axial view of calcaneum. (5)
8. Explain Thoracic spine AP view in detail. (5)
9. Draw the diagram of hip joint showing all articular structures. Explain any one view in detail (5)
10. Explain Bilateral hip (pelvis AP) view in detail. (5)
11. Which view of chest is taken for the patient admitted in ICU by portable x-ray machine. (5)
Write down the patient preparation, indication, patient positioning, centering, technical factors, structure seen for that view.
12. Write different responsibilities of the radiographer during ward radiography? (5)
OR
Write in detail, the radiation safety during mobile/bedside radiography. (5)
