



# RADIOGRAPHIC TECHNIQUES HSSC-II

## SECTION – A (Marks 20)

106

Time allowed: 25 Minutes

Version Number	1	8	9	5
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**Note:** Section – A is compulsory. All parts of this section are to be answered on the separately provided OMR Answer Sheet which should be completed in the first 25 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

**Q. 1** Choose the correct answer A / B / C / D by filling the relevant bubble for each question on the OMR Answer Sheet according to the instructions given there. Each part carries one mark.

- 1) Coronoid process is a:
  - A. Part of scapula
  - B. Part of clavicle
  - C. Part of mandible
  - D. None of these
- 2) Inert gas:
  - A. Means a gas which does not react with other elements
  - B. Means a rare gas
  - C. Means, it is found in the inner side of body
  - D. Means, a highly reactive gas
- 3) The pelvic girdle means:
  - A. Innominate bones and scrum only
  - B. The two hip bones only
  - C. The sacrum bone only
  - D. The upper end of femur only
- 4) Blood group 'O' means:
  - A. Antigen A is present in blood cells
  - B. Antibody B is present in blood cells
  - C. A and B antigens are present in blood cells
  - D. Antibody A and B are present in blood cells
- 5) AV node:
  - A. Is the primary node to give activity to heart
  - B. Is present in the atrial septum of heart
  - C. Is part of axillary lymph nodes
  - D. Is part of inguinal lymph nodes
- 6) Bone forming cells are called:
  - A. Osteoblasts
  - B. Osteoclasts
  - C. Osteocytes
  - D. None of these
- 7) Calcium level in human body is controlled by:
  - A. Parathyroid hormone
  - B. Thyroxin
  - C. Growth hormone
  - D. Vitamin B
- 8) A patient leaves radiology department after test and suffers from blurring of vision, which drug was used:
  - A. Injection glucagon
  - B. Injection Metoclopramide
  - C. Injection Hyoscine N butyl bromide
  - D. Injection insulin
- 9) Which of the following is NOT used as contrast in Radiology?
  - A. Carbon dioxide
  - B. Oxygen
  - C. Barium carbonate
  - D. Gastromiro
- 10) What is wrong about CT KUB?
  - A. Is used instead of IVU
  - B. Urographin is used as IV contrast
  - C. Gastrographin is not used as oral contrast
  - D. No preliminary X-ray film is required

- 11) Which of the following is **NOT** true about Gadolinium:
- A. It is used as MRI contrast                      B. It is used as CT contrast  
 C. It cannot be used in renal impairment      D. It can be used in eye MRI
- 12) Which of the following is **NOT** true about Barium Swallow:
- A. Used to diagnose perforation in the oesophagus  
 B. Used to diagnose trachea-oesophageal fistula  
 C. Used to diagnose diseases of pharynx  
 D. Used to diagnose diseases of oesophagus
- 13) Injection Bascopan is used in:
- A. Barium Swallow                                      B. In Enteroclysis  
 C. Barium enema test                                  D. Barium follow through test
- 14) SI unit of temperature is:
- A. Kelvin    B. Centigrade  
 C. Fahrenheit    D. Joule
- 15) Filament of X-ray tube:
- A. The voltage supply is about 10 volts  
 B. The voltage supply is about 60-150 KVp  
 C. It is made of Tungsten  
 D. The Focusing cup and the filament are on opposite side
- 16) Binding energy of electrons means:
- A. More negative energy of an electrons, more is its binding energy  
 B. More positive energy of an electrons, more is its binding energy  
 C. It is force of attraction between electrons of different shells  
 D. It is the force between electrons and neutrons
- 17) X-ray image distortion occurs when:
- A. The object and image receptors are not parallel to earth and patient is in supine position  
 B. When object to image receptor distance is increased  
 C. When object to image receptor distance is decreased  
 D. When object to focus distance is increased
- 18) Subject contrast is improved when:
- A. KVp is increased                                      B. KVp is decreased  
 C. mAs are increased                                      D. mAs are decreased
- 19) Weight bearing X-rays are required to see:
- A. Dislocation of shoulder joint                      B. Subluxation of shoulder joint  
 C. Dislocation of acromio-clavicular joint      D. Subluxation of acromio-clavicular joint
- 20) Lordotic projection is used to see:
- A. Apices of lungs    B. Lower lobe collapse  
 C. Middle lobe collapse                                      D. Upper lobe collapse



# RADIOGRAPHIC TECHNIQUES HSSC-II

107

Time allowed: 2:35 Hours

Total Marks Sections B and C: 80

**NOTE:** Answer any twenty-five parts from Section 'B' and any three questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

## SECTION – B (Marks 50)

**Q. 2** Answer any TWENTY-FIVE parts. The answer to each part should not exceed 2 to 4 lines. (25x2=50)

- (i) Describe atomic structure.
- (ii) Write briefly about Covalent and Ionic bonds.
- (iii) What is the difference between diffusion and osmosis?
- (iv) Draw and label diagram of scapula.
- (v) Give examples of fibrous joints in human body.
- (vi) Which movements take place at shoulder joint?
- (vii) Write about bicipital groove of humerus bone.
- (viii) Patient is exposed on 50 KVp, what type of radiation is produced?
- (ix) Write about tube rating chart.
- (x) Write down causes of tube failure.
- (xi) How are X-rays produced?
- (xii) Write about focusing cup of X-ray tube.
- (xiii) What is Compton scattering?
- (xiv) What is the effect of filtration on subject contrast?
- (xv) How are the edge filters used?
- (xvi) What is grid ratio?
- (xvii) How is latent image formed on X-ray film?
- (xviii) Which lights can be used in Dark Room?
- (xix) What is penumbra?
- (xx) What is Roengen?
- (xxi) How is an X-ray room built?
- (xxii) What is the difference between digital radiography and computerized radiography?
- (xxiii) How is staff of radiology department protected?
- (xxiv) Write different projections of X-ray hands.
- (xxv) Write anatomy of shoulder joint.
- (xxvi) At what vertebral is 'sternal angle'?
- (xxvii) Write projections for X-ray 1st and 2nd cervical Vertebrae.
- (xxviii) Write X-ray projection for chest.
- (xxix) Why is Town's view done?
- (xxx) Write different projections for para nasal sinuses.
- (xxx) How is an X-ray for temporal joint taken?

## SECTION – C (Marks 30)

**Note:** Attempt any THREE questions. All questions carry equal marks. (3 x 10 = 30)

- Q. 3** Why are X-Rays for feet carried out in weight bearing position? Write the procedure.
- Q. 4** Draw a diagram of human pelvis and label it.
- Q. 5** Why are stress projections for ankle done? Write the procedure.
- Q. 6** A patient in a road accident was hit in the mid of leg. How would X-rays be done to diagnose trauma?
- Q. 7** How to do X-ray for apices of lungs?