



Roll No. \_\_\_\_\_

Answer Sheet No. \_\_\_\_\_

Sig. of Candidate. \_\_\_\_\_

Sig. of Invigilator. \_\_\_\_\_

## RADIOGRAPHIC TECHNIQUES HSSC-II

### SECTION – A (Marks 20)

**Time allowed: 25 Minutes**

**NOTE:** Section-A is compulsory and comprises pages 1-2. All parts of this section are to be answered on the question paper itself. It 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 Circle the correct option i.e. A / B / C / D. Each part carries one mark.**

- (i) Coronoid process is:
- |                     |                          |
|---------------------|--------------------------|
| A. Part of scapula  | B. Part of clavicle      |
| C. Part of mandible | D. None of above it true |
- (ii) Deuterium means:
- A. The name of Hydrogen atom  
B. The name of orbit  
C. The name of scientist who discovered X-rays  
D. The name of Oxygen isotope
- (iii) The shoulder girdle means:
- |                                  |                                     |
|----------------------------------|-------------------------------------|
| A. Clavicle and humerus          | B. Clavicle and scapula             |
| C. Clavicle, scapula and humerus | D. Upper end of humerus and scapula |
- (iv) Blood group 'A' means:
- A. Antigen A is present in blood cells  
B. Antibody A 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
- (v) SA node is present in:
- |  |                         |
|--|-------------------------|
| A. Left atrium                             | B. Right atrium         |
| C. At the junction of atria and ventricles | D. In the inguinal area |
- (vi) Which of the following is a sesamoid bone?
- |                |                  |
|----------------|------------------|
| A. Carpal bone | B. Tarsal bone   |
| C. Patella     | D. Pisiform bone |
- (vii) Infraspinatus fossa is:
- A. On the anterior side of scapula  
B. On the posterior side of scapula  
C. On the posterior side of spine of vertebra  
D. On the anterior side of spine of cervical vertebra
- (viii) Non ionic dimer:
- A. Is better than non ionic monomer  
B. Is not better than non ionic monomer  
C. Causes more changes in osmolality than ionic dimers  
D. Causes more changes in osmolality than ionic dimers
- (ix) A patient with significant renal impairment, is on metformin and undergoing IVU test:
- A. No need to stop metformin before test  
B. Metformin to be stopped 48 hours before test  
C. Metformin to be stopped 24 hours before test  
D. No need for hydration before test
- (x) MRI IV contrast:
- A. Ferromagnetic substances are best  
B. Paramagnetic substances can be used  
C. Supraparamagnetic substances are worst  
D. Barium is the best contrast

DO NOT WRITE ANYTHING HERE

- (xi) Barium sulphate:  
A. Is stable in acidic media  
B. Barium carbonate is used instead of  
C. Can be used as IV contrast  
D. Is not safe when goes to lung as compared to gastrographin
- (xii) A patient comes for test on intestine, with suspicion of perforation of intestine, which agent is to be used:  
A. Diluted barium sulphate solution      B. Diluted Baritop solution  
C. Diluted EZHD solution      D. Diluted LOCM solution
- (xiii) Which of the following drug is not used in patients with acute angle glaucoma:  
A. Gastrographin      B. Glucagon  
C. Buscopan      D. Metoclopramide
- (xiv) Small bowel enema:  
A. Is synonymous term of enteroclysis  
B. Catheter is introduced through rectum  
C. Catheter is introduced through cut in the abdomen  
D. Four inches plastic tube is used for the test
- (xv) Electron volt:  
A. Is the unit of kinetic energy      B. Is the unit of potential energy  
C. Is the unit of charge on electron      D. Is the unit of voltage across tube
- (xvi) Coulomb is the unit of:  
A. SI unit of Charge      B. Unit of Energy  
C. Unit of Force      D. Unit of Frequency
- (xvii) Wrong about X-ray tube filament:  
A. Is made of Copper      B. Is made of Tungsten  
C. Is the source of electron      D. Is on the cathode side of tube
- (xviii) Focusing cup of X-ray tube is made of:  
A. Tungsten      B. Nickel  
C. Copper      D. Copper and Tungsten alloy
- (xix) Bremsstrahlung radiation is produced when electrons:  
A. Hit L shell electrons of Tungsten  
B. Hit K shell electrons of Tungsten  
C. Pass between empty space between K and L shell  
D. Pass near the nucleus of Tungsten
- (xx) Geometric unsharpness of X-ray films increased when:  
A. Patient is moving  
B. Focus to object distance is increased  
C. Object to receptor distance is decreased  
D. object to receptor distance is increased

For Examiner's use only:

Total Marks:

20

Marks Obtained:

— 2HA 1750 —



# RADIOGRAPHIC TECHNIQUES HSSC-II

109

Time allowed: 2:35 Hours

Total Marks Sections B and C: 80

**NOTE:** Sections B and C comprise pages 1-2. 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) What is meant by isotopes?
- (ii) What is electrolyte?
- (iii) What is the difference between mitosis and meiosis?
- (iv) Write down parts of temporal bones?
- (v) Write down about secondary and primary curves of Spine?
- (vi) Draw and label the diagram of hip bone?
- (vii) What is heel effect? How is it used for good X-ray?
- (viii) What is the advantage of metal tube housing?
- (ix) Write note on Anode of X-ray tube?
- (x) How coherent scattering occurs?
- (xi) Write factors affecting attenuation of X-ray beam?
- (xii) What is filtration of X-ray beam?
- (xiii) Write about grid pattern?
- (xiv) Write down about replenishment solution in X-ray development?
- (xv) Why intensifying screens are used?
- (xvi) What is magnification in X-ray?
- (xvii) What is the basic method of Tomography?
- (xviii) What is rad?
- (xix) What are the source of natural radiation?
- (xx) What is the transducer of ultrasound?
- (xxi) Which areas you will protect most from X-rays?
- (xxii) Write down different views during barium swallow procedure?
- (xxiii) Write projections for carpal bones X-rays?
- (xxiv) Write anatomy of elbow joint?
- (xxv) How to conduct general survey of shoulder joint in non trauma case?
- (xxvi) At what vertebral level sternal notch is?
- (xxvii) Where is thyroid cartilage?
- (xxviii) Write projection for X-ray lumbar spine?
- (xxix) How to image heart on X-ray?
- (xxx) What is Town's view?
- (xxxii) Write projections for X-ray pelvis?

## SECTION – C (Marks 30)

**Note:** Attempt any THREE questions. All questions carry equal marks.

(3 x 10 = 30)

- Q. 3** A person with trauma to lower part of forearm came for X-rays, how will you do the required X-rays?
- Q. 4** Name tarsal bones. How X-rays are done to see the bones?
- Q. 5** A 70 years old patient complains of pain in knee, how and what X-rays are done?
- Q. 6** Why lordotic view is done? Write the detail technique for it?
- Q. 7** A patient complains of pain in right wrist after trauma, what X-rays will be done? Give detail.