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Answer Sheet No. _____

Sig. of Candidate. _____

Sig. of Invigilator. _____

89

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) A young woman is probably pregnant if she had unprotected intercourse on:
- A. 5th day of his menstrual cycle B. 7th day of his menstrual cycle
C. 9th day of his menstrual cycle D. 11th day of his menstrual cycle
- (ii) Maximum radiation dose occurs in which test among following options:
- A. X-ray chest PA view B. X-ray lumbar spine
C. Barium meal D. Barium large bowel
- (iii) Radiation effect on human may **NOT** be:
- A. Hereditary in nature B. Deterministic in nature
C. Stochastic in nature D. Logistic in nature
- (iv) Dose limit for a worker in radiology department in one year should **NOT** exceed?
- A. 20 mSv B. 10 mSv
C. 500 mSv D. 100 mSv
- (v) What is best for an X-ray PNS?
- A. Implied consent is sufficient B. Written consent is sufficient
C. Express consent is sufficient D. Non consent is required
- (vi) What is true about unit of radioactivity?
- A. Megabecquerel and Milisievert B. Megabecquerel and Millicurie
C. Millicurie and Milisievert D. None of these
- (vii) Which is False?
- A. Water is used as contrast in CT abdomen
B. Urographin is used as contrast in CT abdomen
C. Gastromoiro is used as contrast in CT abdomen
D. None of these
- (viii) Best statement:
- A. Urographin is the best IV contrast B. Gastromiro is best IV contrast
C. Isovist is the best IV contrast D. Omnipaque is the best IV contrast
- (ix) Barium mixed with water forms:
- A. Syrup B. Suspension
C. Solution D. None of these
- (x) Berium is not used as contrast in:
- A. Test for Tracheoesophageal fistula B. Barium swallow and Barium meal at a time
C. Meal and follow through at a time D. Barium enema with recent rectal biopsy
- (xi) Incorrect about Hyoscine-N-Butylbromide (Buscopan) use:
- A. Barium follow through test B. Barium enema test
C. patient of Renal failure D. patient of Liver failure

DO NOT WRITE ANYTHING HERE

- (xii) Incorrect about Glucagon injection:
- A. Can be used in place of Metoclopramide (maxolon)
 - B. Can be used in place of Buscopan
 - C. Can cause allergic reactions
 - D. Can raise blood sugar level
- (xiii) Barium meal is the study of:
- A. Esophagus
 - B. Stomach and duodenum
 - C. Stomach, duodenum and small intestine
 - D. Esophagus, stomach and small intestine
- (xiv) Distortion of image occurs:
- A. When image is taken while patient moving
 - B. When contrast is too high
 - C. When Bucky and object are not parallel
 - D. When film is developed in bad conditions
- (xv) Image sharpness improves when:
- A. Image is taken in moving condition
 - B. Collimators are used
 - C. Intensifying screens are used
 - D. Thickly coated film is used
- (xvi) Geometric Unsharpness:
- A. Also called penumbra
 - B. Also called umbra
 - C. collimators have no role
 - D. Equipment vibration has no role
- (xvii) Subject contrast improves when:
- A. High KV techniques are used
 - B. When low mAs are used
 - C. If X-ray chest is taken
 - D. If X-ray of soft tissues only is taken
- (xviii) X-ray shoulder in right posterior oblique position means:
- A. Right side shoulder is towards the tube
 - B. If the Bucky is on back side of the patient then the right anterior side of the shoulder is in contact with the Bucky
 - C. If the Bucky is on back side of the patient then the anterior side of left shoulder is away from the Bucky
 - D. If the Bucky is on back side of the patient then the posterior side of right shoulder is away from the Bucky
- (xix) Sternal angle:
- A. Is at the upper border manubrium part of sternum
 - B. Is at the upper border of body of sternum
 - C. Is at the lower border of body of sternum
 - D. Is at the level of 2nd thoracic vertebra
- (xx) Mammography:
- A. Aluminum is used in anode
 - B. Should be avoided in pregnant women
 - C. Is done with tube of more than 100 KV capacity
 - D. Tungsten is used as filter instead of aluminum

For Examiner's use only:

Total Marks:

20

Marks Obtained:

— 2HS 1650 —



RADIOGRAPHIC TECHNIQUES HSSC-II

90

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 electromagnetic radiation?
- (ii) What are the SI units of radioactivity?
- (iii) What is X-ray tube?
- (iv) What is focusing cup and what is it made up of?
- (v) What filament is made up of and why?
- (vi) Write about anode of X-ray tube.
- (vii) Where tube rating chart is used in radiology?
- (viii) What are the types of grids?
- (ix) How will U control radiation to the patient?
- (x) How will U give IV injection?
- (xi) Where PET scan is used?
- (xii) What material is used in imaging plate in CR radiography?
- (xiii) Name the contents of X-ray cassette.
- (xiv) What is over penetrated film?
- (xv) What is magnification of X-ray?
- (xvi) What is subject contrast?
- (xvii) What is name of the instrument used on patient while doing Ultrasound?
- (xviii) How the image of vessels is taken?
- (xix) What are the requirements of X-ray room?
- (xx) What is the basic principle of X-ray and CT scan?
- (xxi) Write anatomy of heart.
- (xxii) Write about bones of wrist.
- (xxiii) Write about different part of brain.
- (xxiv) Where cerebellum is found in human beings?
- (xxv) What is angiogram?
- (xxvi) Write down stomach parts.
- (xxvii) What is lymphangiogram?
- (xxviii) Name metatarsal bones.
- (xxix) Name great vessels in abdomen?
- (xxx) What happens when a charge is accelerated?
- (xxxii) What PACS stands for?

SECTION – C (Marks 30)

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

(3 x 10 = 30)

- Q. 3** What are the views to see paranasal sinuses on X-ray? Write one in detail.
- Q. 4** Write anatomy of proximal radio ulnar joint and how the X-ray of right elbow joint is taken.
- Q. 5** Write the views of X-ray of lungs. Write one in detail.
- Q. 6** How an x-ray room is constructed?
- Q. 7** What the crystal of X-ray film is made of? How latent image is formed?