

- (xi) X-rays and Gamma rays _____
A. Always travel in a straight line
B. Can be influenced by a magnetic field
C. Can be influenced by an electric field
D. None of these
- (xii) Exposure to ionizing radiation can be limited _____
A. With the use of shielding
B. By increasing distance from the source
C. By limiting the time of exposure
D. All of these
- (xiii) The unit of radiation absorbed dose is _____
A. Curie
B. Gray
C. Roentgen
D. Becquerel
- (xiv) Which of the following is ultraviolet radiation?
A. Ultrasound
B. Microwave
C. X-ray
D. Radiowave
- (xv) Which of the following statements is **CORRECT**?
A. Transverse plane divides body into superior and inferior sections.
B. Transverse plane divides body into anterior and posterior portions.
C. Transverse plane is also known as frontal plane.
D. Transverse plane divides the body into right and left halves.
- (xvi) Which of the following is a pelvis bone?
A. Iliac bone
B. Temporal bone
C. Clavicle
D. Ethmoid
- (xvii) Which of the following is study of spinal cord?
A. Angiography
B. Arthrography
C. Myelography
D. Cystography
- (xviii) Another name for the shoulder-blade is _____
A. Sternum
B. Clavicle
C. Acromion
D. Scapula
- (xix) The large bone in the thigh is _____
A. Tibia
B. Femur
C. Fibula
D. Ischium
- (xx) X-rays are a form of _____
A. Light
B. Particle radiation
C. Electromagnetic radiation
D. Both A and B

For Examiner's use only:

Total Marks:

20

Marks Obtained:

— 2HA 1450 —



RADIOGRAPHIC TECHNIQUES HSSC-II

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) How can we determine or select a certain slice thickness in MRI?
- (ii) Differentiate between TR and TE.
- (iii) Describe briefly Superconducting magnets.
- (iv) Describe briefly the concept of RF Pulse.
- (v) Write a short note on Gradient Coils.
- (vi) Describe briefly the two types of collimators used in CT imaging.
- (vii) What is the formula for Spiral Pitch Ratio?
- (viii) Describe briefly the principal distinguishing features of multislice CT imaging systems.
- (ix) List the three main parts of radiographic film.
- (x) Name the parts of the bones that connect skull to the vertebral column.
- (xi) Where is the hyoid bone located and what does it do?
- (xii) Name the bones forming the vertebral column.
- (xiii) What are the three functions the anode performs in an X-ray tube?
- (xiv) Write down three causes of X-ray tube failure.
- (xv) Write down the characteristics of X-rays.
- (xvi) Write down the changes in image quality and patient dose in mammography as kVp is increased.
- (xvii) List any four major controls on the operator's console.
- (xviii) What determines the speed of radiographic film?
- (xix) Differentiate between Photoemission and Thermionic emission.
- (xx) What is the principal advantage of spiral CT over MRI?
- (xxi) What are the principal advantages of digital radiography over conventional radiography?
- (xxii) How does spatial resolution change with image matrix size and field of view?
- (xxiii) Distinguish between System software and Application programs.
- (xxiv) What is the effect of scatter radiation on contrast?
- (xxv) What is the grid ratio of the grid?
- (xxvi) Why is it important to keep exposure time as short as possible?
- (xxvii) List the three types of high-voltage generators.
- (xxviii) How does high-voltage generation influence X-ray beam quantity and quality?

