



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(MRIT)-2021

Course Name – Cross Sectional Anatomy and Physiology

Course Code - BMRIT501

(Semester V)

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) Identify the plane which divides the body into dorsal and ventral regions?
 - a) Transverse
 - b) Axial
 - c) Coronal
 - d) Saggital
- (ii) Identify the meningeal layer which is the outermost layer and appears as a bright, thin line surrounding the spinal cord in a transverse CT or MR image?
 - a) Dura mater
 - b) Arachnoid mater
 - c) Pia mater
 - d) Filum terminale
- (iii) Select the right answer: CECT is valuable for assessing which thoracic structures, among others?
 - a) Liver and gallbladder
 - b) Heart and great vessels
 - c) Pancreas and spleen
 - d) Kidneys and bladder
- (iv) Dural Sinuses classify as
 - a) The dural sinuses are very large veins located within the dura mater of the brain
 - b) The dural sinuses are very large veins located within the pia mater of the brain
 - c) they are the veins of the forearm
 - d) The dural sinuses are very large veins located within the arachnoid mater of the brain
- (v) Indicate the right answer: Hydrocephalus is a condition characterized by an abnormal accumulation of:
 - a) Blood in the brain
 - b) Cerebrospinal fluid in the brain
 - c) Brain tissue
 - d) Lipids in the brain
- (vi) Choose the correct answer from following options- Lambdoidal suture is seen in
 - a) Abdomen
 - b) Neck
 - c) Skull
 - d) Spine
- (vii) Predic the largest paranasal sinus which is located above the nasal cavity and between the eyes?
 - a) Frontal sinus
 - b) Maxillary sinus
 - c) Ethmoid sinus
 - d) Sphenoid sinus
- (viii) Select the correct answer: The carotid arteries supply oxygenated blood to which part of the body?
 - a) Brain
 - b) Liver
 - c) Kidneys
 - d) Legs
- (ix) Choose the correct answer: A pulmonary embolism occurs when a blood clot travels and blocks blood flow in which arteries?
 - a) Coronary arteries
 - b) Carotid arteries
 - c) Pulmonary arteries
 - d) Renal arteries
- (x) Select the number of fused vertebrae in Sacrum which is located at the posterior part of the pelvis?
 - a) 1
 - b) 3
 - c) 5
 - d) 7
- (xi) In a coronal section through the pelvis, what can you predict will be visible?
 - a) Spleen
 - b) Bladder
 - c) Stomach
 - d) Small intestine
- (xii) Select the right answer: How many vertebrae make up the human spine (vertebral column)?
 - a) 10
 - b) 24
 - c) 33
 - d) 206
- (xiii) Select the plane which divides the body into anterior and posterior halves?
 - a) Sagittal plane
 - b) Coronal plane
 - c) Axial plane
 - d) None of these
- (xiv) Identify the landmark structure that separates the thoracic and abdominal cavities?
 - a) Diaphragm
 - b) Liver
 - c) Spleen
 - d) Kidney
- (xv) Select from the following plane that passes diagonally between the axes of two other planes
 - a) Oblique plane
 - b) Coronal Plane
 - c) Sagittal Plane
 - d) Axial Plane

Group-B
(Short Answer Type Questions)

3 x 5=15

2. Write Hounsfield units of air, fat, pure water, CSF, white matter, gray matter and blood.
3. Differentiate T1 and T2 axial brain MRI
4. Explain Subdural hematoma and it's radiological appearance in NCCT brain
5. Write about the arterial system of head and neck with proper diagram.
6. Explain the Anatomy of thorax in any one axial plane image

(3)
(3)
(3)
(3)
(3)

OR

Explain subarachnoid hemorrhage and it's radiological appearance in NCCT brain

(3)

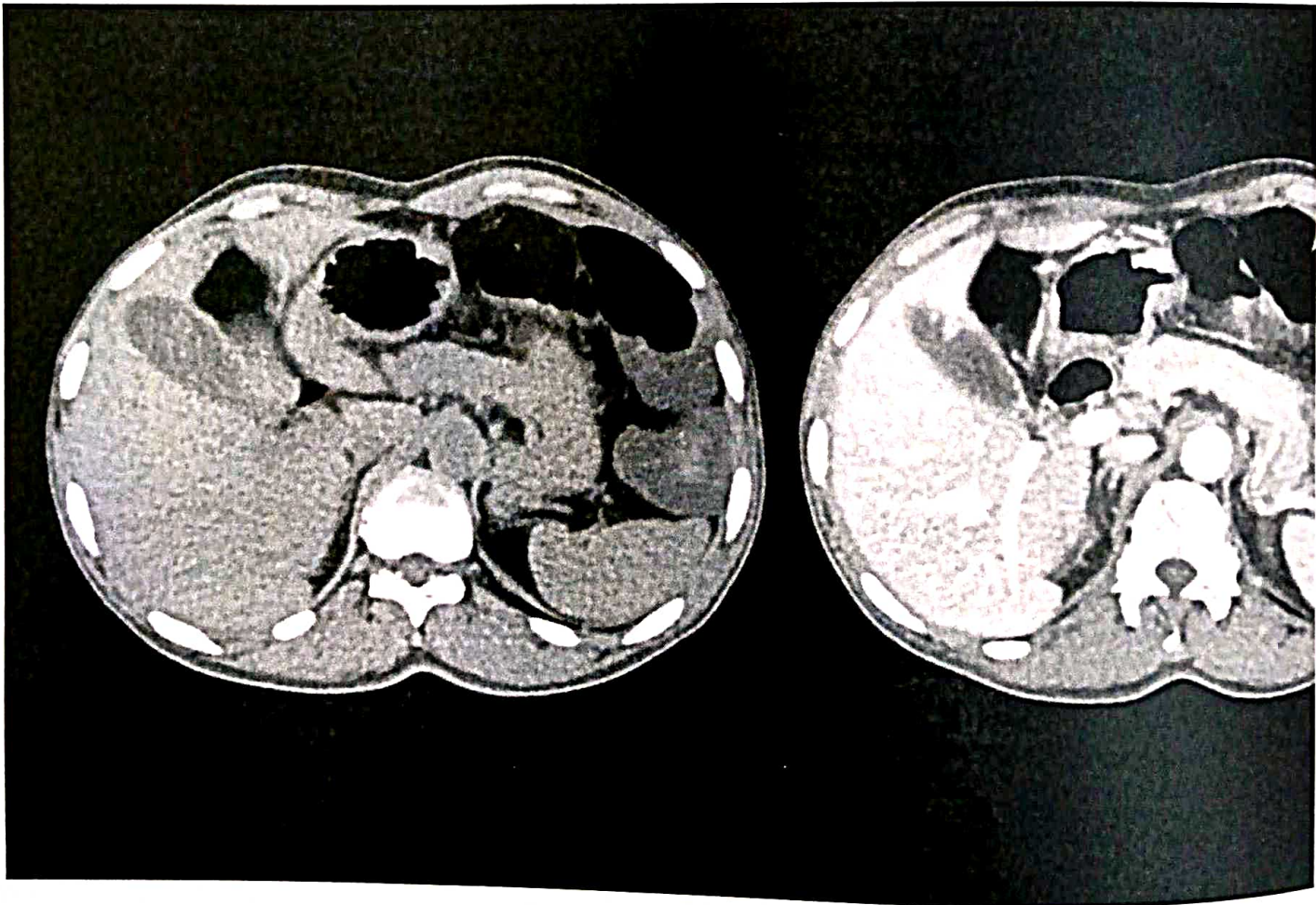
Group-C
(Long Answer Type Questions)

5 x 6=30

7. Explain about the normal anatomy of lower abdomen in CT imaging.
8. Discuss the characteristics of the urinary bladder as seen on abdominal CT images.
9. Differentiate between different types of brain hemorrhage in CT with diagram
10. Explain about the normal anatomy of thorax.
11. Identify the pathological finding from the below mentioned image and explain about it.



12. Select the correct image of CECT abdomen and explain the anatomy of it.



OR

Compare the anatomy of male and female reproductive system.

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