

Test Bank for Sectional Anatomy for Imaging Professionals 5th Breedlove

Test Bank - Chapter 01

Q1: Which vertical plane passes through the body, dividing it into anterior and posterior portions?

- A. Sagittal
- B. Coronal (Correct)**
- C. Axial
- D. Oblique

Rationale: The coronal plane passes through the body and divides it into anterior and posterior halves.

Q2: To which direction does the term contralateral refer?

- A. On the same side
- B. On the opposite side (Correct)**
- C. Toward the midsagittal plane
- D. Away from the midsagittal plane

Rationale: Contralateral is a directional term that means "on the opposite side."

Q3: In imaging, which plane is generally used for the short axis direction of anatomy?

- A. Sagittal
- B. Coronal
- C. Axial (Correct)**
- D. Oblique

Rationale: The axial plane is generally used for the short-axis direction of anatomy.

Q4: To which direction does the term rostral refer?

- A. The front or palm of the hand
- B. The sole of the foot
- C. Toward the feet
- D. Toward the nose (Correct)**

Rationale: Rostral (from the Latin word for "beak") is a directional term that means "toward the nose."

Q5: To which area does the term popliteal refer?

- A. Upper portion of the leg
- B. Back of the knee (Correct)**
- C. Lower portion of the leg
- D. Sole of the foot

Rationale: The term popliteal refers to the back of the knee.

Q6: To which area does the term flank refer?

- A. Upper chest or breast
- B. Lower back between the ribs and hips
- C. Side of the trunk adjoining the lumbar region (Correct)**
- D. Abdomen

Rationale: The regional term flank refers to the side of the trunk adjoining the lumbar region.

Q7: In which area is the aortic arch located?

- A. 2.5 cm below the jugular notch (Correct)**
- B. At T4-T5, sternal angle
- C. 4 cm above the transpyloric plane
- D. 2 cm above the transpyloric plane

Rationale: The aortic arch is an internal landmark located 2.5 cm below the jugular notch.

Q8: In which area is the carotid bifurcation located?

- A. 4 cm above the pyloric plane
- B. 4 cm above bifurcation of the abdominal aorta
- C. At the upper border of the thyroid cartilage (Correct)**
- D. At the upper margin of the sacroiliac joint

Rationale: The carotid bifurcation is located at C4, near the upper border of the thyroid cartilage.

Q9: In which area is the inferior mesenteric artery located?

- A. 2 cm above the transpyloric plane
- B. 4 cm above the transpyloric plane
- C. 2.5 cm below the jugular notch
- D. 4 cm above the bifurcation of the abdominal aorta (Correct)**

Rationale: The inferior mesenteric artery is located 4 cm above the bifurcation of the abdominal aorta.

Q10: Most of the small intestine is located in which abdominal quadrant?

- A. Right upper quadrant (RUQ)
- B. Right lower quadrant (RLQ)
- C. Left upper quadrant (LUQ)
- D. Left lower quadrant (LLQ) (Correct)**

Rationale: Most of the small intestine, as well as portions of large intestine, are located in the left lower quadrant (LLQ).

Q11: Which body cavity is the largest?

- A. Dorsal
- B. Ventral (Correct)**
- C. Abdominal
- D. Pelvic

Rationale: The ventral cavity is the largest body cavity.

Q12: Which plane passes diagonally between the axes of two other planes?

- A. Sagittal
- B. Coronal
- C. Axial
- D. Oblique (Correct)**

Rationale: The oblique plane is a plane that passes diagonally between the axes of the two other planes.

Q13: To which direction does the term caudal refer?

- A. On the same side
- B. On the opposite side
- C. Toward the feet (Correct)**
- D. Toward the head

Rationale: Caudal (from the Latin word for "tail") is a term that indicates direction toward the feet.

Q14: To which direction does the term proximal refer?

- A. On the same side
- B. On the opposite side
- C. Away from a reference point
- D. Toward a reference point (Correct)**

Rationale: The term proximal indicates direction towards a given reference point or source inside the body.

Q15: To which area does the term axillary refer?

- A. Armpit (Correct)**
- B. Forearm
- C. Front of elbow
- D. Upper arm

Rationale: Axillary is a regional term that refers to the armpit.

Q16: To which area does the term cubital refer?

- A. Lower posterior portion of the leg
- B. Posterior surface of elbow area of the arm (Correct)**
- C. Lower back between the ribs and hips
- D. Upper portion of the leg

Rationale: The term cubital refers to the posterior surface of the elbow region of the arm.

Q17: To which area does the term antebrachial refer?

- A. Armpit
- B. Ribs
- C. Forearm (Correct)**
- D. Upper arm

Rationale: Antebrachial refers to the forearm region.

Q18: The term inguinal refers to which area?

- A. Spine
- B. Naval
- C. Sternum
- D. Groin (Correct)**

Rationale: The term inguinal refers to the groin region.

Q19: The carina is located at which vertebrae?

- A. L4 to L5.
- B. T4 to T5, sternal angle. (Correct)**
- C. L1 to L2.
- D. T1 to T2, sternal angle.

Rationale: The carina (a Latin word meaning "keel") is an internal landmark found at T4 to T5, the sternal angle.

Q20: The dorsal cavity can be further subdivided into which cavities?

- A. Cranial and spinal (Correct)**
- B. Thoracic and abdominopelvic
- C. Two lateral pleural
- D. Abdominal and pelvic

Rationale: The dorsal cavity can be subdivided into the cranial and spinal cavities.

Q21: The stomach and the tail of the pancreas are in which abdominal quadrant?

- A. Right upper
- B. Left upper (Correct)**
- C. Right lower
- D. Left lower

Rationale: Both the stomach and the tail of the pancreas are found in the left upper quadrant (LUQ).

Q22: Which parameter allows for the adjustment of the gray scale?

- A. CT number
- B. Hounsfield unit
- C. Window width (Correct)**
- D. Window level

Rationale: Window width (WW) allows for the adjustment of the grayscale – the number of shades of gray.

Q23: Echogenicity is a term used to define which item?

- A. T1
- B. CT number
- C. Sonographic pixel intensity (Correct)**
- D. T2

Rationale: Echogenicity is a term used to define the brightness of pixels within a sonographic image.

Q24: A hyperechoic structure has which intensity in relation to its surrounding structures?

- A. Darker
- B. Brighter (Correct)**
- C. Similar
- D. Duller

Rationale: Hyperechoic describes brighter echoes to surrounding structures.

Q25: Which technique uses a ray from the camera's viewpoint that is directed to stop at a particular user-defined threshold value?

- A. Multiplanar reformation
- B. Shaded surface display (Correct)**
- C. Maximum intensity projection
- D. Volume rendering

Rationale: In the shaded surface display imaging technique, a ray from the camera's viewpoint is directed to stop at a particular user-defined threshold value. With this method, every voxel with a value greater than the selected threshold is rendered opaque, creating a surface. That value is then projected onto the viewing screen.

Q26: Water is used as a reference tissue and is given which CT number?

- A. -1000
- B. -500
- C. 0 (Correct)**
- D. +1000

Rationale: The attenuating value of water is used as the reference tissue and is given a value of zero.

Q27: The transpyloric plane is found midway between which points?

- A. xiphisternal joint and the pubic symphysis
- B. xiphisternal joint and umbilicus (Correct)**
- C. Tubercles of the iliac crests
- D. Tubercles of the iliac crests and L3

Rationale: The transpyloric plane is found midway between the xiphisternal joint and the umbilicus, passing through the inferior border of the L1 vertebra.

Q28: Which midline point is found at the anterior nasal spine where the upper lip and nasal septum meet?

- A. Nasion
- B. Gonion
- C. Mastoid tip
- D. Acanthion (Correct)**

Rationale: This external landmark is the acanthion.

Q29: The crest of the ilium is located at which vertebral level?

- A. L2
- B. L3
- C. L4
- D. L5 (Correct)**

Rationale: The iliac crests are at L5.

Q30: The figure here illustrates which imaging plane? [Image omitted]

- A. Axial
- B. Coronal (Correct)**

- C. Sagittal
- D. Oblique

Rationale: This figure illustrates the coronal imaging plane.

Q31: The figure here illustrates which imaging plane? [Image omitted]

A. Axial (Correct)

- B. Coronal
- C. Sagittal
- D. Oblique

Rationale: This is an axial image.

Q32: The figure here illustrates which imaging plane? [Image omitted]

- A. Axial
- B. Coronal (Correct)**
- C. Sagittal
- D. Oblique

Rationale: This is a coronal image.

Q33: The figure here illustrates which imaging plane? [Image omitted]

- A. Axial
- B. Coronal
- C. Sagittal (Correct)**
- D. Oblique

Rationale: This is a sagittal image.

Q34: The figure here is an example of which imaging technique ? [Image omitted]

- A. 3D Sonography
- B. Shaded surface display (Correct)**
- C. Maximum intensity projection
- D. Volume rendering

Rationale: This is an example of a shaded surface display.

Q35: The figure here is an example of which imaging technique? [Image omitted]

- A. 3D Sonography
- B. Shaded surface display
- C. Maximum intensity projection (Correct)**
- D. Volume rendering

Rationale: This is a maximum intensity projection.

Q36: Which image algorithm does not use the principle of ray-tracing?

- A. Shaded surface display (SSD)
- B. Maximum intensity projection (MIP)
- C. 2D imaging (Correct)**
- D. Volume rendering (VR)

Rationale: 2D imaging does not use ray tracing.

Q37: The figure here is an example of which imaging technique? [Image omitted]

- A. 3D Sonography (Correct)**
- B. Shaded surface display
- C. Maximum intensity projection
- D. Volume rendering

Rationale: This image is a product of 3D sonography.