Sectional Anatomy for Imaging Professionals 5th edition Breedlove Test Bank

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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

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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.