The Royal Australian and New Zealand College of Radiologists®

Anatomy

Paper 2 Exam

Monday, 9 September 2019

Please write your answers in the books provided, starting each question on a new page.

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CASE 1

Question 1:

Transverse MRI brain T2-weighted images (2 images)

Label the structures 1-16. Please be specific **(1/2 mark each).**

Question 2: Transverse T2WI MRI of the brain

a) Name the structure labelled A.
Where does it arise?
What are its tributaries?
Where does it terminate? **(3 marks)**

b) Name the structure labelled B?
What is its origin?
Where is it located?
What does it drain? **(3 marks)**

c) Which transverse sinus does structure A and B most commonly drain into? **(2 marks)**

d) Name the structure labelled C. What bony landmark is it related to? **(1 mark)**

e) Name the structure labelled D. What structures does it drain? **(2 marks)**

f) What does the inferior anastomotic vein (of Labbe) drain into? **(1 mark)**

Question 3:

Name five (5) common variants of the circle of Willis. **(5 marks)**

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CASE 2

Question 1:

Transverse CT images of the temporal bone (3 images)

Label the structures 1-16. Be specific. **(1/2 mark each)**

Question 2:

a) Name the structure labelled A.
What are it's two (2) parts called?
(3 marks)

b) Name the structure labelled B.
What attaches C to the lateral margins of B?
(2 marks)

c) Name the structure labelled C.
What is its midline attachment?
(2 marks)

d) Name the structure labelled D.
(1 mark)

e) Describe the innervation of the larynx.
(4 marks)

Question 3:

a) Name three (3) common or important variants of the thyroid gland (excluding vascular variants). **(3 marks)**

b) Name two (2) common or important variants of the parathyroid glands (excluding vascular variants). **(2 marks)**

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CASE 3

Question 1:

Label the structures 1-16. Be specific. **(1/2 mark each)**

Question 2:

Frontal selective thoracic spinal angiogram with the catheter in the left T12 branch

a) Name the vessel labeled A and what side and level does it typically arise from? **(3 marks)**

b) Name the vessel labeled B. **(1 mark)**

c) Which part of the spinal cord does the posterior spinal arteries supply? **(1 mark)**

d) Describe the origin and course of the anterior spinal artery. **(2 marks)**

e) Which arteries give rise to the segmental medullary and radicular arteries? **(5 marks)**

Question 3:

Name five (5) common or important variants of the thoracic vertebrae. **(5 marks)**

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CASE 4

Question 1:

Label the structures 1-16. Be specific. **(1/2 mark each)**

Question 2:

a) What is the segment and lobe labelled A? **(1 mark)**

b) What is the structure labelled B and what two structures does it separate? **(1 mark)**

c) What is the structure labelled C and what two structures does it separate? **(1 mark)**

d) What is the segment and lobe labelled D? **(1 mark)**

e) Name the segments of the left upper lobe. **(4 marks)**

f) Name the segments of the left lower lobe**. (4 marks)**

Question 3:

List five (5) common or significant variants of aortic arch branches. **(5 marks)**.

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CASE 5

Question 1:

Label the structures 1-16. Be specific. **(1/2 mark each)**

Question 2:

a) Name the labelled structures. **(2 marks)**

b) Name the boundaries of the epiploic foramen (of Winslow). **(4 marks)**

c) Which liver segments are located between the right and middle hepatic veins? **(1 mark)**

d) Which liver segments does the left hepatic vein drain? **(2 marks)**

e) What structure separates segments 2 and 3 from segment 4? **(1 mark)**

f) Which hepatic vein(s) drain segment 1? **(1 mark)**

g) What structures define the horizontal plane that divides the superior and inferior liver segments? **(1 mark)**

Question 3:

Name five (5) common or important variants of the pancreas and its ducts. **(5 marks)**

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CASE 6

Question 1:

Label the structures 1-16. Be specific. **(1/2 mark each)**

Question 2:

Transverse 10 minute-delayed phase CT of the pelvis.

a) Describe the innervation of structure A.
(4 marks)

b) What is structure B? Describe its arterial supply. **(5 marks)**

c) What is structure C? Describe its lymphatic drainage.
(3 marks)

Question 3:

Name five (5) common or important variants of the male gonads and their development. **(5 marks)**

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CASE 7

Question 1:

Frontal and lateral Y radiographs of the right shoulder.

Label the structures 1-16. Be specific. **(1/2 mark each).**

Question 2:

Transverse diagram of the wrist.

a) Name the structure labelled A and list its attachments. **(3 marks)**

b) What is structure B and describe its action/s? **(2 marks)**

c) Name the structure labelled C and list the muscles it innervates in the hand. **(5 marks)**

d) What is structure D and describe its action/s? **(2 marks)**

Question 3:

Name five (5) common or important variants of the arterial supply of the hand. **(5 marks)**

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CASE 8

Question 1:

Coronal and transverse proton density MRI of the right ankle.

Label the structures 1-16. Be specific. **(1/2 mark each)**

Question 2:

a) What is A and what attaches to it? **(2.5 marks)**

b) Describe the blood supply to structure B. **(4 marks)**

c) What is C? What attaches to it and what is its action/s? **(2.5 marks)**

d) Which muscles attach to D? Which nerve innervates these muscles? **(3 marks)**

Question 3:

List five (5) common or important variants of the sciatic nerve? **(5 marks)**

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