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38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

American Registry for Diagnostic Medical Sonography (ARDMS)

PS

Pediatric Sonography

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for American Registry for Diagnostic Medical Sonography (ARDMS) PS, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, PS
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

SINGLE CHOICE

Which congenital renal anomaly is characterized sonographically by multiple non-communicating cysts of varying sizes with no identifiable normal renal parenchyma, and is typically unilateral?

- ☐ A Autosomal recessive polycystic kidney disease
- ☒ B Multicystic dysplastic kidney
- ☐ C Simple renal cyst
- ☐ D Horseshoe kidney

ANSWER B

WHY Multicystic dysplastic kidney (MCDK) presents as multiple non-communicating cysts of varying size replacing normal renal parenchyma, usually unilateral, with no functioning renal tissue on that side.

QUESTION 2

SINGLE CHOICE

When measuring the pylorus for suspected hypertrophic pyloric stenosis, which of the following muscle wall thickness measurements is generally considered diagnostic in a symptomatic infant?

- ☐ A 1 mm
- ☐ B 2 mm
- ☒ C 4 mm or greater
- ☐ D 8 mm or greater

ANSWER C

WHY A pyloric muscle wall thickness of 3-4 mm or greater, along with a pyloric channel length of 15-17 mm or greater, is generally used to diagnose hypertrophic pyloric stenosis.

QUESTION 3

SINGLE CHOICE

On neonatal head sonography, a germinal matrix hemorrhage that extends into the lateral ventricle without ventricular dilation is classified as which grade of intraventricular hemorrhage?

- ☐ A Grade I
- ☒ B Grade II
- ☐ C Grade III
- ☐ D Grade IV

ANSWER B

WHY Grade II intraventricular hemorrhage involves extension of germinal matrix hemorrhage into the ventricle without ventricular dilation. Grade I is confined to the germinal matrix, Grade III has ventricular dilation, and Grade IV includes parenchymal extension.

QUESTION 4

SINGLE CHOICE

Which acoustic window is primarily used to obtain standard coronal and sagittal images during a neonatal cranial ultrasound?

- ☐ A Mastoid fontanelle
- ☒ B Anterior fontanelle
- ☐ C Posterior fontanelle
- ☐ D Foramen magnum

ANSWER B

WHY The anterior fontanelle is the primary acoustic window for standard neonatal cranial ultrasound, allowing coronal and sagittal imaging planes of the brain.

QUESTION 5

MULTIPLE CHOICE

Which of the following are recognized sonographic features associated with biliary atresia in an infant? (Choose two.)

- ☒ **A** Absent or abnormal gallbladder despite fasting
- ☒ **B** Triangular cord sign at the porta hepatis
- ☐ **C** Massively dilated common bile duct with choledochal cyst
- ☐ **D** Enlarged, hyperechoic gallbladder with normal contraction after feeding

ANSWER A • B

WHY Biliary atresia is associated with an absent, small, or abnormally shaped gallbladder even after fasting, and the 'triangular cord sign,' representing fibrous tissue at the porta hepatis. A choledochal cyst is a separate anomaly, and normal gallbladder contraction argues against biliary atresia.

QUESTION 6

SINGLE CHOICE

In the Graf method of infant hip ultrasound, which angle measurement primarily assesses the bony acetabular roof coverage of the femoral head?

- ☒ **A** Alpha angle
- ☐ **B** Beta angle
- ☐ **C** Femoral neck-shaft angle
- ☐ **D** Acetabular index on radiograph

ANSWER A

WHY The alpha angle in the Graf method measures the slope of the bony acetabular roof and is used to assess hip stability and dysplasia; the beta angle assesses the cartilaginous roof coverage.

QUESTION 7

SINGLE CHOICE

On transverse sonographic imaging, intussusception classically demonstrates which of the following appearances?

- ☒ **A** Target or doughnut sign with concentric rings of bowel
- ☐ **B** Keyboard sign of valvulae conniventes
- ☐ **C** Whirlpool sign of the mesenteric vessels only
- ☐ **D** String sign of a narrowed pyloric channel

ANSWER A

WHY Intussusception classically shows a target or doughnut sign in transverse view, representing alternating hyperechoic and hypoechoic concentric rings from the telescoped bowel loops.

QUESTION 8

TRUE FALSE

On a pediatric echocardiogram-focused sonographic exam, situs inversus refers to a mirror-image reversal of the normal position of the thoracic and abdominal organs.

- ☒ **A** True
- ☐ **B** False

ANSWER A

WHY Situs inversus is defined as a mirror-image reversal of the normal left-right arrangement of the thoracic and abdominal viscera, which is important to recognize when scanning pediatric abdomen and cardiac anatomy.

QUESTION 9

SINGLE CHOICE

Which sonographic finding is most specific for diagnosing acute appendicitis in a pediatric patient?

- ☒ **A** A non-compressible, blind-ending tubular structure greater than 6 mm in diameter
- ☐ **B** Free fluid in the pelvis without a visualized appendix
- ☐ **C** Thickened bowel wall in the sigmoid colon
- ☐ **D** Enlarged mesenteric lymph nodes only

ANSWER A

WHY A non-compressible, blind-ending tubular structure in the right lower quadrant measuring greater than 6 mm in outer diameter is the classic and most specific sonographic criterion for acute appendicitis.