

# Visual SPI Cert Test, New SPI Test Tutorial

## SPI Practice Test

A 1.5D transducer has what capacity?

- A. Electronically recognition in the elevational aircraft
  - b. Produce a three-D photo
  - c. Dynamic aperature
  - d. Color Doppler imaging - ANS-a.
- A lower in power or depth by using a component of 2 represents a exchange of

- a. -three dB
- b. -50 dB
- c. -6 dB
- d. 3 B - ANS-a.

A decrease inside the thickness of a piezoelectric element will bring about

- a. A more pulse period
  - b. An growth in the propagation speed
  - c. A lower in the satisfactory issue if the bandwidth decreases.
  - d. An growth within the frequency of the transducer - ANS-d.
- A longitudinal wave is characterized by way of \_\_\_\_\_.

- A. The ability of the sound wave to penetrate 5 cm of tissue
  - b. Frequency of vibration more than 1 MHz
  - c. Acoustic velocity equals 1,540 m/s
  - d. Particle motion in equal route as the route of wave propagation - ANS-d.
- A slice-thickness phantom measures which plane of the transducer?

- A. The scanning aircraft
- b. The elevation aircraft
- c. The azimuthal plane
- d. The temporal aircraft - ANS-b.

A small (relative to the wavelength) reflector is stated to \_\_\_\_\_ an incident sound beam

- a. Consciousness
- b. Speculate
- c. Scatter
- d. Expand - ANS-c.

A video display that is limited to handiest black and white, with out a different shades of gray, is called \_\_\_\_\_.

P.S. Free 2026 ARDMS SPI dumps are available on Google Drive shared by TroytecDumps: <https://drive.google.com/open?id=1bB9tT7zYhQfKk10cbAhSkr5k3y9zg2W->

To ensure that you have a more comfortable experience before you choose to purchase our SPI exam quiz, we provide you with a trial experience service. Once you decide to purchase our SPI learning materials, we will also provide you with all-day service. If you have any questions, you can contact our specialists. We will provide you with thoughtful service. With our trusted service, our SPI Study Guide will never make you disappointed.

## ARDMS SPI Exam Syllabus Topics:

Topic	Details
Topic 1	<ul style="list-style-type: none"> <li>• Perform Ultrasound Examinations: This section of the exam measures skills of Sonographers and covers how to conduct ultrasound procedures while ensuring patient safety and diagnostic accuracy. It includes understanding of imaging protocols, ergonomics, patient care, and the interaction between sound and tissue. Candidates are expected to demonstrate abilities to manage patient encounters, apply 3D</li> <li>• 4D and contrast imaging concepts, identify and correct artifacts, and follow confidentiality and privacy standards throughout the scanning process.</li> </ul>

Topic 2	<ul style="list-style-type: none"> <li>• <b>Optimize Sonographic Images:</b> This section of the exam measures skills of Diagnostic Medical Sonographers and assesses their ability to enhance image quality using advanced optimization techniques. It includes understanding axial, lateral, elevational, and temporal resolution, as well as manipulating gain, depth, magnification, and dynamic range. Examinees are expected to apply harmonic imaging, spatial compounding, and gray-scale techniques to produce clear, accurate diagnostic images.</li> </ul>
Topic 3	<ul style="list-style-type: none"> <li>• <b>Manage Ultrasound Transducers:</b> This section of the exam measures skills of Ultrasound Technicians and focuses on the management and proper use of different types of transducers. It evaluates knowledge of transducer components, frequency selection, and application of various 2D, 3D, 4D, and nonimaging transducer concepts. Candidates must show they can choose the appropriate transducer for specific examinations and make necessary frequency adjustments to ensure image quality.</li> </ul>
Topic 4	<ul style="list-style-type: none"> <li>• <b>Apply Doppler Concepts:</b> This section of the exam measures skills of Vascular Sonographers and evaluates understanding and application of Doppler ultrasound principles. It includes knowledge of Doppler angle, flow dynamics, and color and spectral Doppler imaging. The section also covers eliminating aliasing, interpreting waveforms, applying continuous and pulsed wave Doppler, and optimizing Doppler gain and scale to accurately measure blood flow and velocity within vessels.</li> </ul>
Topic 5	<ul style="list-style-type: none"> <li>• <b>Provide Clinical Safety and Quality Assurance:</b> This section of the exam measures skills of Clinical Ultrasound Supervisors and focuses on maintaining safety and quality standards in ultrasound practice. It includes infection control protocols, transducer and machine integrity checks, and quality assurance testing using tissue-mimicking phantoms. The section also requires familiarity with statistical parameters like sensitivity and specificity to evaluate diagnostic performance and ensure consistent, reliable imaging outcomes.</li> </ul>

>> Visual SPI Cert Test <<

## Free PDF Quiz 2026 ARDMS SPI: Trustable Visual Sonography Principles and Instrumentation Cert Test

For ARDMS professionals, passing the Sonography Principles and Instrumentation exams such as the SPI Exam is essential to achieve their dream professional life. However, passing the Sonography Principles and Instrumentation (SPI) Exam is not an easy task, especially for those with busy schedules who need time to prepare well for the SPI Exam. To ensure success on the SPI Exam, you need ARDMS SPI Exam Questions that contain all the relevant information about the exam.

### ARDMS Sonography Principles and Instrumentation Sample Questions (Q141-Q146):

#### NEW QUESTION # 141

Which feature is a characteristic of continuous wave Doppler?

- A. Low thermal index
- B. Range specificity
- **C. Dedicated transmit and receive crystals**
- D. Aliasing

**Answer: C**

Explanation:

Continuous wave Doppler uses two crystals - one for transmitting and one for receiving ultrasound waves continuously. This allows for the measurement of high velocities without aliasing, a common limitation in pulsed wave Doppler. However, continuous wave Doppler does not have range specificity, meaning it cannot precisely determine the depth from which the Doppler signal is returning. Reference: ARDMS Sonography Principles and Instrumentation, Chapter on Doppler Ultrasound.

### NEW QUESTION # 142

Which structure can be evaluated using M-mode?

- A. Kidneys
- B. Pancreas
- C. Liver
- **D. Heart**

**Answer: D**

Explanation:

Comprehensive and Detailed Explanation From Exact Extract:

M-mode (motion mode) ultrasound records the movement of structures along a single scan line over time. It is particularly valuable in cardiac imaging where precise motion of heart valves and walls is evaluated.

Principles and Instrumentation reference:

"M-mode is primarily used in echocardiography to evaluate the motion of cardiac structures with high temporal resolution."

\* Liver, kidneys, and pancreas are evaluated using B-mode, not M-mode.

Therefore, the correct answer is A: Heart.

### NEW QUESTION # 143

A Doppler shift is 10,000 Hz at an angle of flow of 60 degrees. What is the Doppler shift at 0 degrees?

- A. 10,000 Hz
- B. 2,500 Hz
- C. 5,000 Hz
- **D. 20,000 Hz**

**Answer: D**

Explanation:

depends on the angle between the ultrasound beam and the direction of blood flow. The Doppler equation includes a cosine function of the angle of insonation ( $\theta$ ). At 60 degrees, the cosine is 0.5, and at 0 degrees (parallel to the flow), the cosine is 1. Thus, if the Doppler shift is 10,000 Hz at 60 degrees, it would double to

20,000 Hz at 0 degrees because the cosine of 0 degrees is 1 ( $\cos(0^\circ) = 1$ ) and the cosine of 60 degrees is 0.5 ( $\cos(60^\circ) = 0.5$ ).

The formula is: Doppler shift at 0 degrees = Doppler shift at 60 degrees /  $\cos(60 \text{ degrees}) =$

$10,000 \text{ Hz} / 0.5 = 20,000 \text{ Hz}$

References:ARDMS Sonography Principles and Instrumentation (SPI) Review, Doppler Shift and Angle of Insonation section.

### NEW QUESTION # 144

Which unfocused transducer will have the greatest divergence?

- A. 6 mm aperture, 4 MHz
- B. 6 mm aperture, 6 MHz
- C. 4 mm aperture, 6 MHz
- **D. 4 mm aperture, 4 MHz**

**Answer: D**

Explanation:

Transducer beam divergence is influenced by the aperture size and frequency. A smaller aperture and lower frequency result in greater beam divergence. Among the given options, the transducer with a 4 mm aperture and 4 MHz frequency will have the greatest divergence. This is because the smaller aperture size contributes to a wider beam spread, and the lower frequency also increases the divergence compared to higher frequencies.

Reference:

ARDMS Sonography Principles and Instrumentation guidelines

Krenkau, F. W. (2015). Diagnostic Ultrasound: Principles and Instruments. Elsevier.

### NEW QUESTION # 145



id=1bB9tT7zYhQfKk10cbAhSkr5k3y9zg2W-