

## **Chapter 01: The History of Diagnostic Medical Sonography and Sonographers de Jong: Craig's Essentials of Sonography and Patient Care, 4th Edition**

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### **MULTIPLE CHOICE**

1. Diagnostic ultrasound uses frequencies between:
  - a. 2.0 and 15.0 MHz.
  - b. 1.0 and 15.0 MHz.
  - c. 2.0 and 20.0 MHz.
  - d. 1.0 and 20.0 MHz.

ANS: D

2. Sound exceeds human hearing when the cycles per second exceeds:
  - a. 10,000 Hz.
  - b. 15,000 Hz.
  - c. 20,000 Hz.
  - d. 25,000 Hz.

ANS: C

3. Humans can hear frequencies as low as:
  - a. 10 cycles per second.
  - b. 15 cycles per second.
  - c. 20 cycles per second.
  - d. 50 cycles per second.

ANS: C

4. Sonography is the \_\_\_\_\_ oldest imaging modality.
  - a. second
  - b. third
  - c. fourth
  - d. fifth

ANS: B

5. Which physician devoted his career to the study and development of noninvasive measurement of the peripheral vascular system?
  - a. John Reid
  - b. Don Baker
  - c. Rokuru Uchida
  - d. Eugene Strandness

ANS: D

6. Which physician developed the first application of ultrasound for medical purposes?
  - a. Don Baker
  - b. George Ludwig
  - c. John Reid
  - d. James Willocks

ANS: B

7. Who discovered the importance of a full urinary bladder to visualize pelvic structures?
- John Wild
  - Ian Donald
  - Inge Elder
  - Carl Hellmuth Hertz

ANS: B

8. Who explored the use of ultrasound in the heart using continuous wave and M-mode?
- George Kossoff
  - William Wright
  - Inge Edler
  - Ian Donald

ANS: C

9. The phenomenon of piezoelectricity was discovered by:
- the Curie brothers.
  - John Reid.
  - Ian Donald.
  - Wilhelm Roentgen.

ANS: A

10. Color flow imaging started to take off in the United States in:
- 1980.
  - 1984.
  - 1987.
  - 1991.

ANS: C

11. Early sonographers were called:
- radiographers.
  - ultrasound technicians.
  - ultrasound technologists.
  - ultrasound technical specialists.

ANS: D

12. Who discovered X-ray?
- John Reid
  - Martin Wilcox
  - George Ludwig
  - Wilhelm Roentgen

ANS: D

13. Which country led the development of color Doppler?
- Germany

- b. Japan
- c. Holland
- d. United States

ANS: B

14. Research began on medical applications for sonar after:
- a. World War I.
  - b. World War II.
  - c. Korean War.
  - d. Vietnam War.

ANS: B

15. George Kossoff helped to develop:
- a. M-mode.
  - b. grayscale.
  - c. color Doppler.
  - d. continuous wave Doppler.

ANS: B

16. In 1980, \_\_\_\_\_ shades of gray were displayed in the static B-scanner.
- a. 32
  - b. 64
  - c. 128
  - d. 256

ANS: B

17. Who first considered using ultrasound to distinguish between healthy and cancerous tissue in both the breast and intestines?
- a. John Wild
  - b. Douglass Howry
  - c. Ian Donald
  - d. George Ludwig

ANS: A

18. Who tried to disprove Christian Doppler's theory using a musician on a train?
- a. Shigeo Satomura
  - b. Robert Rushner
  - c. Eugene Strandess
  - d. Christoph Hedrick Diederik

ANS: D

19. Who developed the first Doppler device for medical diagnostic purposes?
- a. Eugene Strandess
  - b. Shigeo Satomura
  - c. Robert Rushner
  - d. Koroku Namekawa

ANS: B

20. The first annual sonographer awareness week occurred in:
- a. 1980.
  - b. 1984.
  - c. 1987.
  - d. 1991.

ANS: D

21. The American Medical Association defines technician as someone with:
- a. a high school diploma.
  - b. 6 weeks to 6 months beyond high school.
  - c. 6-12 months beyond high school.
  - d. 2 years beyond high school.

ANS: B

22. The RVT credential was first offered in:
- a. 1980.
  - b. 1983.
  - c. 1990.
  - d. 1991.

ANS: B

23. The first practical, oral, and written ultrasound examinations were administered in:
- a. 1970.
  - b. 1974.
  - c. 1980.
  - d. 1983.

ANS: B

24. The RDCS credential was first offered in:
- a. 1980.
  - b. 1983.
  - c. 1990.
  - d. 1991.

ANS: C

25. The term sonologist refers to a \_\_\_\_\_ who interprets the ultrasound study.
- a. radiologist
  - b. cardiologist
  - c. obstetrician
  - d. physician no matter the specialty

ANS: D