1. Which medical imaging technique utilizes X-rays to produce detailed images of internal body structures in real-time?

a) MRI
b) Ultrasonography
c) Fluoroscopy
d) Thermography

Answer: c) Fluoroscopy

Fluoroscopy involves the use of X-rays to capture real-time moving images of internal structures, commonly used in procedures such as barium studies and angiography.

2. Which imaging technique relies on the detection of emitted radiation from the body to generate detailed cross-sectional images?

a) Computer tomography
b) Endoscopy
c) MRI
d) Biometric systems

Answer: a) Computer tomography

Computer tomography, commonly known as CT or CAT scan, uses X-rays to produce detailed cross-sectional images of the body.

3. Which imaging technique does not use ionizing radiation and relies on strong magnetic fields and radio waves to produce images of internal body structures?

a) Ultrasonography
b) Endoscopy
c) MRI
d) Thermography

Answer: c) MRI

MRI, or Magnetic Resonance Imaging, utilizes strong magnetic fields and radio waves to create detailed images of internal body structures without exposing the patient to ionizing radiation.

4. What type of imaging technique involves the use of high-frequency sound waves to visualize internal organs and structures?

a) MRI
b) Fluoroscopy
c) Ultrasonography
d) Biotelemetry systems

Answer: c) Ultrasonography

Ultrasonography, commonly referred to as ultrasound, uses high-frequency sound waves to produce images of internal organs and structures, commonly used in obstetrics and cardiology.

5. Which technique involves the insertion of a flexible tube with a camera into the body to visualize internal organs and tissues?

a) Thermography
b) MRI
c) Endoscopy
d) Computer tomography

Answer: c) Endoscopy

Endoscopy involves the insertion of a flexible tube equipped with a camera and light source into the body to examine internal organs and tissues, commonly used in gastroenterology and pulmonology.

6. What method measures body temperature distribution to identify abnormalities or injuries?

a) MRI
b) Thermography
c) Fluoroscopy
d) Endoscopy

Answer: b) Thermography

Thermography measures the distribution of body temperature to identify abnormalities or injuries by detecting variations in heat radiation.

7. Which type of patient monitoring system allows for remote monitoring of physiological parameters such as heart rate and blood pressure?

a) MRI
b) Biometric systems

c) Endoscopy
d) Biotelemetry systems

Answer: d) Biotelemetry systems

Biotelemetry systems enable the remote monitoring of physiological parameters such as heart rate, blood pressure, and ECG (electrocardiogram), allowing for continuous patient monitoring outside traditional healthcare settings.

8. What technology involves the continuous monitoring and transmission of physiological data from implanted sensors to an external device?

a) Endoscopy
b) Thermography
c) Biometric systems
d) Biotelemetry systems

Answer: d) Biotelemetry systems

Biotelemetry systems involve the continuous monitoring and transmission of physiological data from implanted sensors to an external device, commonly used in cardiac monitoring and research applications.

9. Which type of monitoring system utilizes unique biological characteristics such as fingerprints or iris patterns for identification?

a) MRI
b) Biometric systems

c) Ultrasonography
d) Endoscopy

Answer: b) Biometric systems

Biometric systems utilize unique biological characteristics such as fingerprints, iris patterns, or facial recognition for identification and authentication purposes.

10. Which imaging technique involves the capture of thermal patterns emitted by the body to detect abnormalities or changes in blood flow?

a) Endoscopy
b) MRI
c) Thermography
d) Ultrasonography

Answer: c) Thermography

Thermography captures thermal patterns emitted by the body to detect abnormalities or changes in blood flow, commonly used in areas such as breast health assessment and sports medicine.