

## Module – 1 – Anatomy & Physiology

1) Anatomy breaks the human abdomen down into segments called \_\_\_\_\_.

- a) Regions
- b) Districts
- c) Quadrants
- d) Areas

Answer: c

2) The central abdominal area is the \_\_\_\_\_ region.

- a) Iliac
- b) Hypogastric
- c) Peritoneal
- d) umbilical

Answer: d

3) Sodium chloride is an example of a/an \_\_\_\_\_.

- a) Base
- b) Acid
- c) Ion
- d) Electrolyte

Answer: c

4) The \_\_\_\_\_ is the organelle that plays a complex function in cell reproduction.

- a) centriole
- b) centrosome
- c) chromosome
- d) lysosome

Answer: b

5) The metabolically most active organ in the body probably is the \_\_\_\_\_.

- a) Brain
- b) Liver
- c) skeletal muscle
- d) heart

Answer: b

6) A group of cells that performs a specific function is organized as a \_\_\_\_\_.

- a) Organ
- b) Tissue
- c) System
- d) Organelle

Answer: b

7) The \_\_\_\_\_ tissue is considered a type of lining for body areas.

- a) Epithelial
- b) Connective
- c) Nervous
- d) Muscle

Answer: a

8) The flexibility of the outer ear is due mainly to \_\_\_\_\_ tissue.

- a) Hyaline
- b) Elastic cartilage
- c) Fibrocartilage
- d) Epithelial

Answer: b

9) Which type of muscle is found in the wall of blood vessels?

- a) Skeletal
- b) Cardiac
- c) Smooth visceral
- d) Multi-unit smooth

Answer: d

10) What is the function of the renal system?

- a) Maintain blood pH
- b) Regulate blood pressure
- c) Control blood concentration
- d) All of these

Answer: d

## **Module 3: Healthcare Technology and Function**

1. Which of the following is considered to be the primary pacemaker of the heart?

- a) atrio-ventricular node
- b) purkinje fibres
- c) bundle of His
- d) sino-atrial node

Answer: d

2. In ECG signal, which segment has low amplitude and low frequency content?

- a) QRS complex
- b) R-R interval
- c) ST segment
- d) T-P interval

Answer: c

3. In the ECG Circuit, which amplifier circuitry is used to reduce the hum noise generated by the power supply?

- a) low pass filters
- b) high pass filters
- c) band pass filters
- d) notch filters

Answer: d

4. In EMG, the ground electrode is usually positioned over which body structure?

- a) bony
- b) hairy
- c) fleshy
- d) sweaty

Answer: a

5. The letter 'T' used in the EEG electrode placement system denotes?

- a) Thalamus
- b) Third ventricle
- c) Tympanic
- d) Temporal lobe

Answer: d

6. Which of the following method uses only the visual assessment as a measuring instrument?

- a) Telemetric
- b) Colorimetric
- c) Polarimetric
- d) Calorimetric

Answer: b

7. Which detector is used in spectrophotometer?

- a) Phototransistor
- b) Photodiode
- c) LDR
- d) Photomultiplier

Answer: d

8. Which instrument is used to record continuous and instantaneous foetal heart rate and labour activity?

- a) Ergometer
- b) Cardiotocograph
- c) Cardiotocometer
- d) Cardiotonometer

Answer: b

9. What is the range of the signal intensity of pure-tone audiometer?

- a) 10 dB to +100 dB
- b) -10 dB to -100 dB
- c) -10 dB to +100 dB
- d) -10 dB to +10 dB

Answer: c

10. Which instrument is used to record reflex responses?

- a) EEG
- b) ECG
- c) EMG
- c) VCG

Answer: c

## **Module – 5 - Healthcare Information Technology**

- Q1. Health Informatics is the intersection of:
- Health and Informatics
  - Health Science and Computer Science
  - Health Science, Information Management, and Computers
  - Health Science, Information Management/Information Technology, and Management Science

Answer: d

- Q2. Which of the following areas is not an application of Health Informatics?
- Dentistry
  - Pharmacy
  - English
  - Occupational Therapy

Answer: c

- Q3. What does HL7 stand for?
- Health Line Seven
  - Health Level Seven
  - High Level Seven
  - High Line Seven

Answer: b

- Q4. What are some other terms for an Electronic Health Record?
- Electronic Patient Record
  - Electronic Medical Record
  - Both a and b
  - None of the above

Answer: c

- Q5. When designing a relational database, the first step of data modeling is known as the
- Conceptual Model
  - Physical Model
  - Context Model
  - Logical Model

Answer: a

- Q6. Which of the following is a central repository for data from various sources within the organization?
- Electronic Health Record
  - Hospital-Wide System
  - Data Warehouse
  - Data Mine

Answer: c

Q7. A system of computers, peripherals, terminals and databases connected by communication lines is known as a(n)

- a. Operating system
- b. Network
- c. Hardware
- d. Information Technology Unit

Answer: b

Q8. The major benefit of a telehealth system is that it

- a. Facilitates sharing of information across sites
- b. Allows patients in remote areas to receive care without having to travel
- c. Saves money
- d. Guarantees a patient's privacy

Answer: b

Q9. The world's leading standard for the electronic exchange of healthcare information is

\_\_\_\_\_.

- a. SNOMED
- b. XML
- c. HL7
- d. HTML

Answer: c

Q10. The electronic record of encounters within the primary care physician's office is known as a (an)

- a. Electronic Patient Record (EPR)
- b. Electronic Medical Record (EMR)
- c. Electronic Health Record (EHR)
- d. Personal Health Record (PHR)

Answer: b

## Module 7. Healthcare Safety & Standards

1) What are the types of Electrical shocks?

- a) Gross shocks
- b) Micro shocks
- c) Gross shock & Micro shock
- d) Macro & Micro shocks

Answer: d

2) The base current a person can sense is around?

- a) 0.1mA
- b) 5mA
- c) 1mA
- d) 2mA

Answer: c

3) What are the physiological effects caused with the current range between 80-100mA?

- a) Tingling sensation
- b) Intense or painful sensation
- c) Respiration paralysis and pain
- d) Ventricular and heart fibrillation

Answer: d

4) Fundamental Hazards that must be evaluated as a part of any product safety evaluation

- a) Electrical Shock
- b) Mechanical / Physical injury
- c) Low voltage / high energy
- d) all the above

Answer: d

5) Hipot test is performed to measure the ability of the product to withstand.

- a) High Voltages
- b) Low voltages
- c) Leakage currents
- d) Electrical insulation

Answer: a

6) What is the standard for electrical safety of medical equipments.

- a) IEC 60335-1
- b) IEC60950-1
- c) IEC 60065-1
- d) IEC 60601-1

Answer: d

7) What is material safety data sheet (MSDS)?

- a) Health effects of exposure to the product
- b) Hazard evaluation related to the product handling or storage
- c) Measure to protect workers at risk of exposure
- d) All the above

Answer: d

- 8) Toxicology is a discipline of?
- a) Overlapping of Biology & chemistry
  - b) Overlapping of biology & Pharmacology
  - c) Overlapping of chemistry & Medicine
  - d) all the above

Answer: d

- 9) Risk is measures of combination of?
- a) Hazard
  - b) the likelihood of occurrence of the adverse event
  - c) the severity or overall impact
  - d) all the above

Answer: d

- 10) which level of radioactive wastes are generated from hospitals? (a)
- a) Low level waste
  - b) Intermediate level waste
  - c) High level waste
  - d) all the above

Answer: a



## **Module 11. Risk Management / Safety**

1) Medical devices are classified in to how many classes?

- a) Class I
- b) b) Class I, Class II
- c) c) Class I, Class II, Class III
- d) d) Class I, Class II, Class III, Class IV

Answer: d

2) Which class devices are exempt from premarket notification 510K?

- a) Class I
- b) Class I, Class II
- c) Class I, Class II, Class III
- d) Class I, Class II, Class III, Class IV

Answer: a

3) Ideal condition for ensuring the safety and performance of medical devices?

- a) Manufacturer & Government
- b) User & Manufacturer
- c) patient
- d) all the above

Answer: d

## Module – 12 – Radiation Safety

1. The maximum photon energy in an x-ray beam can be determined from the x-ray tube is through
  - a. current (mA)
  - b. voltage (kV)
  - c. exposure time (s)
  - d. ripple (%)Answer: b
2. The tube potential is directly related to the
  - a. Exposure time
  - b. distortion of the image
  - c. contrast of the image
  - d. density of the imageAnswer: c
3. The target material for conventional radiography is generally
  - a. Tungsten
  - b. Molybdenum
  - c. Rhodium
  - d. CopperAnswer: a
4. The unit of exposure is
  - a. Gray
  - b. Sievert
  - c. Roentgen
  - d. Effective doseAnswer: c
5. The radiation weighting factor ( $w_R$ ) is used to convert absorbed dose into:
  - a. exposure
  - b. air kerma
  - c. equivalent dose
  - d. effective doseAnswer: c
6. The threshold dose for the occurrence of skin erythema is
  - a. 2 to 4 Gy
  - b. 2 to 4 mGy
  - c. 4 to 6 mSv
  - d. 20 to 30 mSvAnswer: a

7. The nominal size (mm) of a fine focus on a standard x-ray tube is most likely to be
- a. 0.1
  - b. 0.6
  - c. 0.3
  - d. 1

Answer: b

8. The characteristic nature of a grid that is most likely to determine the performance of scatter removal is
- a. Gap distance
  - b. Focus distance
  - c. Grid ratio
  - d. Strip height

Answer: c

9. In a linear grid used in mammography, the fiber interspaced grid is preferred over aluminum because it reduces:
- a. radiation dose
  - b. scatter
  - c. mottle
  - d. receptor blur

Answer: a

10. Use of grids

- a. increases scatter radiation and enhances contrast resolution
- b. increases noise and enhances contrast resolution
- c. reduces noise and enhances contrast resolution
- d. reduces distortions in the image and enhances contrast resolution

Answer: c

## Module 13. Medical Device Regulatory

1) “The degree of regulation imposed on any device is proportional to its potential hazard”. This approach is called as?

- a) Clinical Effectiveness
- b) Risk Management
- c) Product Safety
- d) None of the above

Answer: b

2) Purpose of Global Harmonization task force (GHTF)?

- a) Safety & Performance
- b) Performance & Quality
- c) Safety & Quality
- d) all the above

Answer: d

3) Types of specifications in standards?

- a) Product characteristics & technical characteristics
- b) Performance specification & Management Specifications
- c) Only a
- d) Both a & b

Answer: d

4) What are the critical elements for regulatory attention?

- a) Product & Use
- b) Product & Vendor
- c) Product & Sale
- d) Product & Service

Answer: a

5) Why do you need standards?

- a) Provide reference criteria that a product and process or service must meet
- b) Provide information on safety, reliability and Performance
- c) both a & b
- d) None of the above

Answer: c

6) FDA regulates Toothbrush as a Medical device?

- a) Yes
- b) No
- c) paradox
- d) None of the above

Answer: a

7) What are class III medical devices?

- a) enema kits
- b) pregnancy test kits
- c) implants
- d) all the above

Answer: c

8) What are class I medical devices?

- a) enema kits
- b) pregnancy test kits
- c) implants
- d) all the above

Answer: a

9) CTD Dossier preparation includes?

- a) 3 Modules
- b) 5 Modules
- c) 7 Modules
- d) 9 Modules

Answer: b

10) In vitro diagnostic product labelling?

- a) 21 CFR Part 801
- b) 21 CFR Part 809
- c) 21 CFR Part 812
- d) all the above

Answer: b