



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Business Administration in Hospital Management

Course Name – Biomedical Equipment Management

Course Code - BBAHMC602

(Semester VI)

Time allotted : 1 Hrs.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) The frequency range of ECG is _____
 - a) a) 0.05-150 HZ
 - b) b) 500-1500 Hz
 - c) c) 5-500 kHz
 - d) d) 0.5-150 MHz
- (2) In which section studies are performed on various body tissues and fluids to determine the presence of pathological micro-organisms?
 - a) a) Chemistry
 - b) b) Haematology
 - c) c) Microbiology
 - d) d) Blood Bank
- (3) Q1. The following are the major functional physiological systems of the body except?
 - a) A. Cardiovascular system
 - b) B. Respiratory system
 - c) C. Electrocardiogram system
 - d) D. Nervous system
- (4) Electroencephalogram is obtained from bioelectrical signals from the?
 - a) A. Brain
 - b) B. Heart
 - c) C. Muscles
 - d) D. Retina
- (5) The following are resistive passive transducers, except?
 - a) A. Strain gauge
 - b) B. Potentiometer
 - c) C. Linear variable differential transformer (LVDT)
 - d) D. Photodiode
- (6) The capacitance of a passive capacitance transducer depends on the following factors, except?
 - a) A. Distance between the two parallel plates
 - b) B. The area of the two parallel plates
 - c) C. Relative dielectric constant
 - d) D. Mass of the two parallel plates
- (7) The biopotentials generated by the muscles of the heart with time is called?

- a) a) 10-12 L
c) c) 5-6 L
- b) b) 2-3 L
d) d) 20-25 L
- (32) Diameter of erythrocytes is in the range of _____
a) a) nano meters
c) c) pico meters
- b) b) micro meters
d) d) femto meters
- (33) Which of the following blood constituent is in the form of a bi-concave disc?
a) a) lymphocytes
c) c) neutrophils
- b) b) leucocytes
d) d) erythrocytes
- (34) Which of the following is the most reliable method for detecting FHR pattern?
a) a) Abdominal foetal electrocardiogram
c) c) Ultrasound technique
- b) b) Foetal phonocardiogram
d) d) Foetal ECG with scalp electrode
- (35) Which of the following instrument is used for recording the chest-wall movements over the apex of heart?
a) Apexcardiograph
c) Electro-oculograph
- b) Ballistocardiograph
d) Electro-retinograph
- (36) The frequency range of ECG is _____
a) 0.05-150 HZ
c) 5-500 kHz
- b) 500-1500 Hz
d) 30-150 MH
- (37) Skin Reflectance oximeter depends on monitoring backscattered lights in how many wavelengths
a) 1
c) 3
- b) 2
d) 4
- (38) In the sampling control, one complete rotation of the plate thus presents _____
a) 35 samples
c) 20 samples
- b) 40 samples
d) 30 samples
- (39) Source of Bioelectric potential is in nature
a) electronic
c) ionic
- b) . electric
d) mechanical
- (40) Phonocardiography is listening to
a) arm muscle sound
c) . heart sound
- b) lungs sound
d) respiratory tract sound
- (41) Where are the electrodes placed for recording foetal electrocardiogram?
a) heart
c) brain
- b) abdomen
d) veins
- (42) What is the magnitude of ECG for a typical adult in the standard lead connection?
a) 1 mV
c) 3 mV
- b) 2 mV
d) 4 mV
- (43) Which section deals with the analysis of blood, urine, CSF and other fluids to determine the quantity of various important substance?
a) Chemistry
c) Microbiology
- b) Haematology
d) Blood Bank
- (44) In a _____ pump ,the fluid is drawn into pump and is then forced outlet

- a) a) Positive displacement
c) c) Airlift
- b) b) Jet
d) d) Propeller Pumps
- (45) In _____ pumps, the energy of the fluid is converted into velocity energy.
a) a) Positive Displacement
c) c) Airlift
b) b) Jet
d) d) Propeller Pumps
- (46) In a single circulation the Heart Pumps?
a) a) Oxygenated blood
c) c) Mixed blood Only
b) b) Deoxygenated blood
d) d) blood nutrients
- (47) In which one of the following year, magnetic resonance imaging was patented?
a) a) 1874
c) c) 1972
b) b) 1784
d) d) 1987
- (48) Magnetic resonance imaging was invented by----
a) a) Sir Stephen Poplawski
c) c) Sir Martin Cooper
b) b) Sir Raymond Damadian
d) d) Sir Tim Berners Lee
- (49) Magnetic resonance imaging was invented by----
a) a) Sir Stephen Poplawski
c) c) Sir Martin Cooper
b) b) Sir Raymond Damadian
d) d) Sir Tim Berners Lee
- (50) Ultrasound 'is a reflection of _____
a) (a) soft tissues only
c) (c) both soft and hard tissues
b) (b) hard tissues only
d) (d) hard muscles only
- (51) What is the wavelength of ultrasound in water?
a) a) 1.5mm
c) c) 4.5mm
b) b) 3mm
d) d) 6.0 mm
- (52) The sound used in sonography is _____
a) a) Infrasonic
c) c) Ultrasonic
b) b) Audible
d) d) None of these
- (53) The effect of spinal Anesthesia on bowels includes
a) a) Increased Peristalsis
c) c) Dilatation
b) b) Contraction
d) d) Atony
- (54) Which radical is generated in water by X-ray?
a) a) H_2°
c) c) OH°
b) b) O_2°
d) d) O°
- (55) The respiratory parameter of the arterial blood gas set is the:
a) a) PO_2
c) c) PCO_2
b) b) O_2 SAT
d) d) HCO_3^-
- (56) Where are test packs placed to present the greatest challenge to the steam sterilizer?
a) a) Bottom rack back
c) c) Centre
b) b) Top Rack Back
d) d) Over the drain
- (57) For sterilization to occur, steam must:
a) a) Make direct contact with all surface
c) c) Be flushed into each package
b) b) Be superheated
d) d) Trap air inside the package
- (58) Which of the following instrument is used for recording the chest-wall movements over the apex of heart?

a) a) Apex cardiograph

b) b) Ballistocardiograph

c) c) Electro-oculography

d) d) Electro-retinography

(59) In the plasma membrane, carbohydrates

a) (a) always faces outwards, towards extracellular space

b) (b) directed to all sides in the membrane randomly

c) (c) always faces to the lumen of cells

d) (d) always faces inward to the nonpolar portion of the membrane

(60) Each minute that defibrillation is delayed reduces the chance of survival of a sudden cardiac arrest victim by about--

a) a) 3 percent

b) b) 50 percent

c) c) 10 Percent

d) d) 40 percent