

NADAR SARSWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : BE/ECE	Year / Semester : III/V	Format No.	NAC/TLP-07a.13
Subject Code : OMD551	Subject Name : Basics Of Biomedical Instrumentation	Rev. No.	02
Unit No : 5	Unit Name : Bio-Chemical Measurement	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.		BTL
1.	Which of the following transducer is used to detect foetal heart movements over a wider area? a) piezo-electric b) ultrasonic c) array d) pressure	L6
2.	What is used to detect foetal heart movements in broad beam transducer? a) Quartz crystal b) Piezo electric crystal c) Topaz crystal d) Berlinite crystal	L5
3.	What is range of ultrasonic energy transmitted into the body? a) 0-5 mW/cm ² b) 5-10 mW/cm ² c) 10-15 mW/cm² d) 15-20 mW/cm ²	L4
4.	What is ultrasonic frequency employed for obstetric studies? a) 0.5 to 1 MHz b) 1 to 1.5 MHz c) 1.5 to 2 MHz d) 2 to 2.5 MHz	L4
5.	Which technique is used to derive an integrated rate of the foetus heart from blood flow signals and to display it on a suitable display system? a) Abdominal Foetal Electrocardiogram b) Foetal Phonocardiogram c) Ultrasound d) Foetal ECG with scalp electrode	L5
6.	Which of the following instrument makes use of the Doppler shift principle? a) Abdominal Foetal Electrocardiogram b) Foetal Phonocardiogram c) Foetus blood flow detector d) Foetal ECG with scalp electrode	L4
7.	Ultrasound provides basically clearer signal than does phonocardiography. a) True b) False	L4
8.	No output pulse will occur when the period between two pulses is less than _____ ms. a) 230 b) 20 c) 400 d) 440	L6

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9.	What is used to delay the change in the time constant in foetal phonocardiograph? a) Preamplifier b) Notch Filter c) Integrator d) Band Pass Filter	L4
10.	If the period duration is lesser than 400 ms, the one-shot will deliver a pulse. a) True b) False	L1
11.	What is the fixed pulse width of the pulse after process of one-shot circuit? a) 110 ms b) 170 ms c) 230 ms d) 280 ms	L1
12.	How many sounds are produced from the normal foetal heart action? a) 1 b) 2 c) 3 d) 4	L4
13.	The preamplifier is incorporated in the transducer housing to maximize interference signals being picked up. a) True b) False	L1
14.	Bandpass filter used in foetal phonocardiogram rejects all frequencies outside the _____ Hz range. a) 0-40 b) 40-80 c) 70-110 d) 110-150	L1
15.	Crystal microphone is used for picking _____ signals. a) cardiac b) brain c) phono d) muscles	L4
16.	How are foetal heart sounds picked up from the maternal abdomen? a) Piezoelectric device b) Sensitive Microphone c) Crystal microphone d) Dynamic microphone	L4

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17.	<p>The plasma is a viscous, light red liquid, i.e. almost clear in the fasting stage.</p> <p>a) True b) False</p>	L5
18.	<p>_____ method is based on the absorption of electromagnetic radiation in the visible, ultraviolet and infrared ranges.</p> <p>a) Cardiotocography b) Ultrasonic therapy c) Spectrophotometry d) Diathermy</p>	L4
19.	<p>Blood consists of corpuscles suspended in a fluid called plasma in the proportion of 45 parts of _____ to 55 parts of _____</p> <p>a) Plasma, corpuscles b) Corpuscles, plasma c) Protoplasma, cytozomes d) Cytozomes, protoplasma</p>	L2
20.	<p>The normal red cell lasts approximately how many days before it is destroyed?</p> <p>a) 240 b) 10 c) 12 d) 120</p>	L5
21.	<p>Anaemia is reduction/increase _____</p> <p>a) in the carbon dioxide carrying capacity of blood b) in the oxygen carrying capacity of blood c) in the oxygen carrying capacity of blood d) in the carbon dioxide carrying capacity of blood</p>	L4
22.	<p>Who has poorer signal-to-noise ratio?</p> <p>a) Transmission Pulse Oximeter b) Reflection Pulse Oximeter c) Ear Oximeter d) Pulse Oximeter</p>	L6
23.	<p>The method based on the absorption of radiation of a substance is known as _____</p> <p>a) Absorption photometry b) Spectrophotometry c) Absorption tocometry d) Absorption spectrophotscopy</p>	L5

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24.	Why is preamplifier used? a) For Amplification b) For Stabilizing effect c) For Reducing effect d) For Modifying effects	L4
25.	Which of the following is the correct anatomical position of the kidney? a) front of the abdominal cavity just below the diaphragm b) back of the abdominal cavity just below the diaphragm c) back of the abdominal cavity just above the diaphragm d) front of the abdominal cavity just above the diaphragm	L4
26.	Thermister is used to measure _____ a) temperature b) pressure c) height d) displacement	L2
27.	RTD stands for _____ a) resistance temperature device b) resistance temperature detector c) reluctance thermal device d) resistive thermal detector	L5
28.	The junction at a lower temperature in the thermocouple called measuring junction. a) True b) False	L6
29.	The _____ carry blood at very high pressure from the aorta into the glomerular capillary. a) renal arteries b) russal arteries c) pulmonary arteries d) fenal arteries	L5
30.	The kidneys work only on plasma. a) True b) False	L2
31.	Each kidney consists _____ number of nephrons. a) thousands b) millions c) billions d) trillions	L5
32.	Diameter of erythrocytes is in the range of _____ a) nano meters b) micro meters c) pico meters d) femto meters	L6

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33.	The ratio of response to a stimulus is called the transfer function. a) True b) False	L4
34.	The normal red cell lasts approximately how many days before it is destroyed? a) 240 b) 10 c) 12 d) 120	L1
35.	The percentage of cells in the blood is called _____ a) haematocrit value b) packet corpuscles value c) packed haematocrit value d) corpuscles value	L3
36.	_____ method is based on the absorption of electromagnetic radiation in the visible, ultraviolet and infrared ranges. a) Cardiotocography b) Ultrasonic therapy c) Spectrophotometry d) Diathermy	L4
37.	The plasma is a viscous, light red liquid, i.e. almost clear in the fasting stage. a) True b) False	L5
38.	If absorbance is plotted graphically against concentration, the graph is _____ a) Parabola b) Increasing c) Straight line d) Decreasing	L6
39.	The ratio of the radiant power transmitted by a sample to the radiant power incident on the sample is known as _____ a) Absorbance b) Transmittance c) Optical density d) Photometric concentration	L3
40. \	_____ waves have short wave-length. a) Microwave b) Radio wave c) Gamma rays d) IR waves	L4