

109/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Ultrasonic blood flow meter is based on the principle of :
(A) Transmission (B) Conductivity
(C) Induction (D) Transit time
2. The normal pH of blood is :
(A) 7 (B) 7.4
(C) 6.6 (D) 7.8
3. Plethysmograph for measuring total lung capacity is based on :
(A) Electromagnetic conduction (B) Faraday's law of induced emf
(C) Boyle's law (D) Flemings right hand rule
4. Cardiac output is the amount of blood delivered by the heart to the aorta per :
(A) Minute (B) Second
(C) Hour (D) Cycle
5. The Non-invasive method of Blood flow measurement :
(A) Angiogram (B) Coulter counter
(C) Electromagnetic blood flow meter (D) Pneumotachograph
6. During myocardial infraction, one can use :
(A) Pace maker (B) Heart lung machine
(C) Nerve stimulator (D) Kidney machine
7. Ground faults can be avoided by using :
(A) 3 pin plug system (B) Isolated power supply
(C) Fuses in the circuit (D) Pure D.C. alone
8. The instrument for administering the electric shock is called :
(A) Ventillators (B) Pace maker
(C) Stimulators (D) Defibrillators

9. The order of imaging methods (from worst to best) with respect to visibility of detail (resolution) is:
- (A) Gamma camera, fluoroscopy, CT
 - (B) Ultrasound, fluoroscopy, radiography
 - (C) Gamma camera, fluoroscopy, MRI
 - (D) Radiography, fluoroscopy, MRI
10. Ventricular asynchronous pacemaker is also called as :
- (A) Fixed rate pace maker
 - (B) Demand pace maker
 - (C) Internal pace maker
 - (D) Inhibited pace maker
11. In biotelemetry, the type of modulation employed is :
- (A) Amplitude modulation
 - (B) Pulse modulation
 - (C) Frequency modulation
 - (D) Phase modulation
12. What type of electrodes is more often employed in EMG work?
- (A) Needle electrodes
 - (B) Surface electrodes
 - (C) Floating electrodes
 - (D) Limb electrodes
13. The T wave is produced during :
- (A) Depolarization of the ventricles
 - (B) Atrial repolarization
 - (C) Repolarization of the ventricles
 - (D) Atrial depolarization
14. Which is not a component of the extracorporeal circuit?
- (A) Blood pump
 - (B) Blood leak detector
 - (C) Heparin infusion line
 - (D) Drip chamber
15. The basic requirements of a biomedical amplifier is/are:
- (A) High input impedance and high gain
 - (B) Limited bandwidth and high signal to noise ratio
 - (C) High Common mode rejection ratio
 - (D) All of the above
16. For the standard Bipolar lead system the R-wave amplitude will be :
- (A) Lead II = Lead I + Lead III
 - (B) Lead I = Lead II + Lead III
 - (C) Lead III = Lead I + Lead II
 - (D) None of the above