

1- The amount of energy that's released from the oxidation of 200 g of glucose is:

- a) 670 Kcal
- b) 720 Kcal
- c) 760 Kcal
- d) 820 Kcal

2- The victim of drowning in cold water can survive longer than in warm water because:

- a) BMR is decreased in cold water.
- b) Oxygen requirement is decreased in cold water.
- c) Energy requirement is minimum.
- d) All of the above.

3- -The amount of energy (per Kcal) that is released after combustion of 20 gm of fat and 50 gm of carbohydrate is:

- a) 233 Kcal
- b) 285 Kcal
- c) 323 Kcal
- d) 391 Kcal
- e) 513 Kcal

4- The P wave in the electrocardiogram represents the:

- a) Interventricular septal depolarization
- b) Atrial repolarization
- c) Ventricular depolarization
- d) Ventricular repolarization
- e) Atrial depolarization

5- Regarding the standard limb leads, which of the following is correct?

- a) Lead I measures the electrical potential between right arm (RA) and left leg (LL).
- b) Lead II measures the electrical potential between right arm (RA) and left arm (LA).
- c) lead III measures the electrical potential between right arm (RA) and right leg (RL).
- d) Lead I measures the electrical potential between right arm (RA) and left arm (LA).
- e) lead III measures the electrical potential between right arm (RA) and left leg (LL).

6- What is the physiological change that occur after increase body temperature?

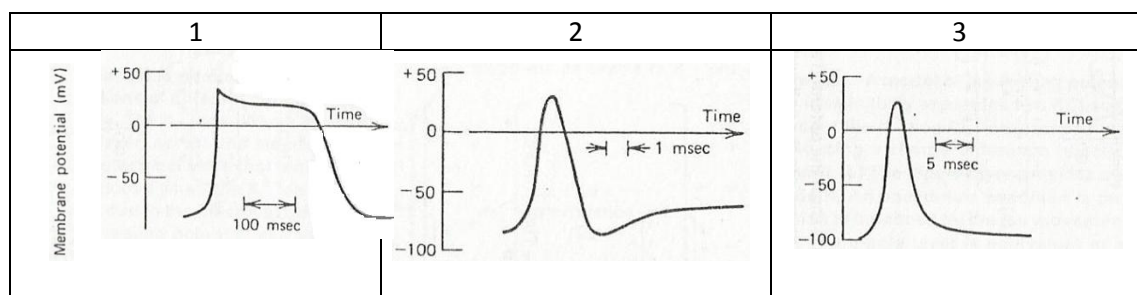
- a) Blood flow to skin decreases, so the skin gets cold
- b) Sweating is increased, so the skin gets cold.
- c) The rate of breathing is decreased to prevent heat loss by the lungs.
- d) Decrease heart rate.

7- The neuron is said polarized if the

- a) Inside the membrane is (-60 to -90) mV more negative than outside.
- b) Inside the membrane is (+60 to +90) mV more positive than outside.
- c) Outside the membrane is (-60 to -90) mV more negative than inside.

8- The wave forms of action potentials are:

- a) 1- A nerve axon. 2- A cardiac muscle cell. 3- A skeletal muscle cell.
- b) 1- A skeletal muscle cell. 2- A cardiac muscle cell. 3- A nerve axon.
- c) 1- A cardiac muscle cell. 2- A nerve axon. 3- A skeletal muscle cell.



9- Regarding the different wave of EEG, choose the correct answer:

- a) Alpha wave (α) appears in deep sleep.
- b) Delta wave (δ) appears in deep sleep.
- c) Beta wave (β) appears in deep sleep.
- d) Theta wave (θ) appears in deep sleep.
- e) None of the above

10- During resting membrane potential:

- a) The inside of the cell is more positive than outside.
- b) The outside of the cell is more negative than inside.
- c) The inside of the cell is more negative than outside.
- d) None of the above

11. Regarding the myelinated nerves, choose the correct statement:

- a) The conduction of action potential by myelinated nerves is slower than the conduction by unmyelinated nerves.
- b) Myelin sheath is a bad insulator.
- c) The myelinated segment of an axon has a very high capacitance.
- d) They produce high propagation velocities in axons of small diameters.

12-The Electromyogram (EMG) was used to measure the conduction velocity of a motor nerve in the forearm. Two stimuli (A & B) were applied and the distance between them is about 20 cm. A recording electrode received the signal from stimuli A after 7 msec and from stimuli B after 3 msec. the conduction velocity of this motor nerve is:

- a) 40 m/s.
- b) 50 m/s.
- c) 60 m/s.
- d) 70 m/s.

13- depolarization operation is start when :

- a) The Na^+ begin to inter the cell.
- b) The K^+ begin to inter the cell.
- c) The Na^+ begin to go out the cell.
- d) The K^+ begin to go out the cell.

14 - Which of the following statements is correct regarding basal metabolic rate (BMR)?

a. In patient with elevated level of thyroid hormone, his BMR is low.

b. Elevated body temperature decreases BMR.

c. The elderly (old people) has lower BMR than young people.

d. During exercise, BMR becomes low to decrease the expenditure of energy.

15- Suppose you wish to lose 4 Kg. How long would you have to work at an activity of 12 Kcal / min?

a) About 30 hours

b) About 40 hours

c) About 50 hours

d) About 60 hours

16 - the pressure generated by right ventricles (25 mm Hg) is 5 times less that of left ventricle (120 mm Hg) , both of them eject the same volume of blood (80 ml of blood). This means that :

a - The resistant against which the RV is pumping blood to the lung is much lower than that of systemic circulation against which the LV works .

b - The resistant against which the RV is pumping blood to the lung is much higher than that of systemic circulation against which the LV works .

c- The resistant against which the RV is pumping blood to the lung is equal to the resistant of systemic circulation against which the LV works .

d- Non above.