1.The permeability of the irritable cell membrane has been increased for potassium ions during an experiment. What changes of membrane electric status can occur?
A. *Hyperpolarization
B.Depolarization
C.Action potential
D.Local response
E.No changes

2. As a result of activation of the ion channels of the external membrane the rest potential of the excitable cell has greatly increased. What channels were activated?
A. Fast calcium channels
B. *Potassium channels
C. Slow calcium channels
D. Sodium and calcium channels
E. Sodium channels

3. Microelectrode analysis of nerve fiber bioelectrical activity revealed, that its membrane potential equals to 90mV. Its initial rest potential was 85mV. What process occurs in this case?
A. Repolarization
B. Supernormality
C. *Hyperpolarization
D. Overshoot
E. Depolarization

4. Cell membrane rest potential changed from -85 to -90 mV. It can be caused by activation of the following cell membrane channels:
A. Calcium
B. Potassium and sodium
C. Sodium
D. *Potassium
E. Potassium and calcium

5. An isolated muscle fiber is under experiment. It was ascertained that excitement threshold of a cell was significantly lowered. What might have caused this phenomenon?
A. Inactivation of membrane sodium channels
B. Activation of membrane potassium channels
C. Inactivation of membrane potassium channels
D. Blockade of energy production in the cell
E. *Activation of membrane sodium channels

6. Stimulation of an excitable cell by the electric current has led to the depolarization of its membrane. The depolarization has been caused mainly by the following ions penetrating into the cell through its membrane:
A. K^+
B. Cl^-
C. Ca^{2+}
D. *Na^+
E. HCO^-_3

Due to action of electric current on the exitable cell there appeared depolarization of it's membrane. Movement of what ions through the membrane caused depolarisation?
A.*Na^+

B.HCO_3^-
C.Ca_2^+
D.Cl^-
E.K^+

Rest potential of a cell equals -80 mV. At what stage of action potential did the membrane potential equal +30 mV?
A.*Reverse polarization
B.After hyperpolarization
C.After depolarization
D.Depolarization
E.-

9. Microelectrode technique allowed to register a potential following "all-or none" low and being able of undecremental spreading. Specify this potential:
A. Receptor potential
B. Inhibitory postsynaptic potential
C. Excitatory postsynaptic potential
D. Rest potential
E. *Action potential

10. When measuring total muscle action potential it was revealed that it was subject to the power-law relationship. The reason for this is that individual muscle fibers differ in:
A. Resting potential
B. Diameter
C. Critical level of depolarization
D***. Depolarization threshold**
E. Conduction velocity

11. In course of experiment there has been increase in the nerve conduction velocity. This may be caused by an increase in the concentration of the following ions that are present in the solution around the cell:
A.* Na^+
B. K^+ and Na^+
C. K^+ and Cl^-
D. Ca^{2+}
E.Ca^{2+} and Cl^-

12. In course of an experiment a skeletal muscle is being stimulated by a series of electric impulses. What type of muscle contraction will arise, if every subsequent impulse comes in the period of relaxation of single muscle contraction?
A.Asynchronous tetanus
B.Muscle contracture
C.A series of single contractions
D. *Partial tetanus, incomplete tetanus
E.Holotetanus

13. In course of experiment a skeletal muscle is being stimulated by a series of electric impulses. What type of muscle contraction will arise, if every subsequent impulse comes in the period of shortening of the previous single muscle contraction?
A. *Holotetanus
B. Muscle contracture

C. Asynchronous tetanus
D. Partial tetanus
E. A series of a single contractions

14. Which muscle contraction will be observed in the upper extremity during holding (not moving) a load in a certain position?

A. Concentric
B. *Isometric
C. Excentric
D. Isotonic
E. Auxotonic

15. What kind of muscle contraction occurs in an upper limb during an attempt to lift a load beyond one's strength?

A. Auxotonic
B. Phasic
C. *Isometric
D. Single
E. Isotonic