

Variant 1

1. Plot the dependence of the impedance on the frequency of the current corresponding to an equivalent circuit with a parallel connection of capacitance and active resistance.
2. Draw an equivalent diagram that best mimics living tissue.

Variant 2

1. What kind of system is the cell and the intercellular fluid electrically?
2. What is the phenomenon of dispersion?

Variant 3

1. What is called impedance?
2. Draw a block diagram to determine the total resistance of electrical circuits that have a qualitative similarity with the resistance of living tissue.

Variant 4

1. What is the reason for the resistance of living tissue?
2. Write down the formula for determining the value of the reactance modulus of circuits containing a series connection of capacitance and inductance.

Variant 5

1. Plot the dependence of the impedance modulus on the frequency for living tissue.
2. Write down the formula for determining the value of the reactance modulus of circuits containing a series connection of capacitance and inductance.

Variant 6

1. What is the reason for the resistance of living tissue?
2. Plot the impedance dependence on the current frequency corresponding to an equivalent circuit with a series connection of capacitance and active resistance.

Variant 7

1. Which elements of electrical circuits are similar to the resistance elements of a living cell?
2. How will the impedance modulus of living tissue change with an increase in current, if it does not exceed the physiological norm?

Variant 8

1. Plot the dependence of the impedance on the frequency of the current corresponding to an equivalent circuit with a parallel connection of capacitance and active resistance.
2. How can the presence of capacitive elements in living tissues be detected?

Variant 9

1. What is the resistance of the intercellular fluid? What is reactance?
2. What causes the dispersion of the impedance modulus?

Variant 10

1. Plot the dependence of the impedance modulus on the frequency for dead tissue. Explain this dependency.
2. Draw an equivalent diagram that best mimics living tissue.

Variant 11

1. Plot the dependence of the impedance on the frequency of the current corresponding to an equivalent circuit with a parallel connection of capacitance and active resistance.
2. How can the dependence of the impedance modulus on frequency be used in medicine?