

Nitric oxide is released from its vesicles in presynaptic terminals

- ☒ a. True
- ☐ b. False

Clear my choice

Erythrocytes growth in bone marrow is controlled by interleukin-3

- ☒ a. True
- ☐ b. False

Clear my choice

One statement about acetylcholine is incorrect

- ☐ a. is synthesized in presynaptic nerve terminal by choline acetyltransferase enzyme.

Facilitated diffusion

- ☐ a. occurs through receptor channel proteins in the cell membrane.
- ☒ b. occurs through integral proteins in the cell membrane.
- ☐ c. differs from simple diffusion in being need no energy.
- ☐ d. differs from active transport in being has carrier protein.

Clear my choice



One statement about vitamin B12 is incorrect

- ☐ a. its absorption needs intrinsic factor secreted by parietal cells of stomach.
- ☐ b. cannot be manufactured in liver
- ☐ c. its absorption is difficult in people with sprue.
- ☒ d. its deficiency as a result of gastrectomy causes microcytic anemia.

Clear my choice

[Clear my choice](#)

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question

The resting membrane potential of a neuron

- ☐ a. differs from that in skeletal muscle fiber.
- ☐ b. increased in cardiac sinoatrial node.
- ☒ c. decreased in facilitated neurons than normal ones.
- ☐ d. increased with increasing neuronal excitability.

[Clear my choice](#)



on 13

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g question

Neutrophils

Time l

- ☒ a. their movement towards the inflamed tissue is called chemotaxis
- ☐ b. Part of them are formed in the thymus.
- ☐ c. are found only in the circulation.
- ☐ d. do not show phagocytic activity.

[Clear my choice](#)

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g question

Erythrocytes

- ☐ a. carry iron in the form of transferrin
- ☐ b. In chronic blood loss they give rise to microcytic hyperchromic anemia.
- ☒ c. their number tends to be decreased in kidney disease
- ☐ d. contain nucleus

[Clear my choice](#)

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All blood cells are derived from pluripotential stem cell in bone marrow

- ☐ a. False
- ☒ b. True

Clear my choice



One statement about acetylcholine is incorrect

- ☐ a. is synthesized in presynaptic nerve terminal by choline acetyltransferase enzyme.
- ☐ b. is inactivated at postsynaptic membranes mainly by cholinesterase enzyme.
- ☒ c. its muscarinic receptor acts through ligand-gated ion channels
- ☐ d. has a stimulatory effect on the intestine.

[Clear my choice](#)

In a nerve cell

- ☐ a. Acidosis increases neuronal excitability.
- ☒ b. excitability is increased if intracellular chloride is decreased.
- ☐ c. excitability is increased if extracellular potassium is increased.
- ☐ d. there is an active efflux of K^+ during hyperpolarization.

[Clear my choice](#)

Skeletal muscle myofilaments has the following features except

- ☒ a. troponin prevents the interaction of actin and myosin in resting state.
- ☐ b. F-actin represents one of the thin filaments.
- ☐ c. tropomyosin is a double helical strand protein.
- ☐ d. myosin is the only thick filament.

[Clear my choice](#)

Propranolol blocks sympathetic alpha receptors

- ☐ a. True
- ☒ b. False

[Clear my choice](#)

Binding of immunoglobulin E to eosinophils causes histaminic allergy

- ☒ a. False
- ☐ b. True

[Clear my choice](#)

Iron is transported in plasma in the form of transferrin

- ☐ a. False
- ☒ b. True

[Clear my choice](#)



Norepinephrine

- ☒ a. is a stronger blood vessels vasoconstrictor than epinephrine.
- ☐ b. is inactivated mainly by monoamine oxidase and catechol-O-methyl transferase enzyme
- ☐ c. excites G-proteins-linked beta receptors rather than alpha receptors
- ☐ d. decreases peristalsis and sphincter tone of the gut.

[Clear my choice](#)

GABA receptors make their inhibitory action through Cl⁻ influx or K⁺ efflux

- ☒ a. True
- ☐ b. False

[Clear my choice](#)

Facilitated diffusion is the way by which lipid-soluble substances can cross cell membrane

- ☐ a. True
- ☒ b. False

Clear my choice

The walk-along theory of skeletal muscle describes mainly the power stroke

- ☐ a. False
- ☒ b. True

Clear my choice

Norepinephrine

Bilirubin is the product of hemoglobin destruction by macrophages

- ☐ a. False
- ☒ b. True

Clear my choice



Blood platelets

- ☐ a. derived from lymphoid tissues in bone marrow
- ☐ b. increase their number in leukemic patients.
- ☐ c. Unlike leukocytes, they derived from pluripotential stem cell in bone marrow
- ☒ d. decrease their number in leukemic patients

Calcium is actively pumped into endoplasmic reticulum by primary transport

- ☐ a. False
- ☒ b. True

[Clear my choice](#)

Lymphocytes are produced only in lymphogenous tissues

- ☐ a. True
- ☒ b. False

[Clear my choice](#)

The nerve impulse

- ☒ a. spreads in both directions across the nerve fiber.
- ☐ b. is terminated by increasing active K^+ efflux.
- ☐ c. its conduction is faster in unmyelinated fibers than myelinated ones.
- ☐ d. its duration is longer in skeletal than cardiac muscles.

[Clear my choice](#)

Polycythemia vera is a genetic disorder characterized by high blood viscosity

- ☒ a. True
- ☐ b. False

[Clear my choice](#)

Leukemic patients have a bleeding tendency caused by thrombocytopenia

- ☒ a. True
- ☐ b. False

Clear my choice

One statement about erythropoietin is incorrect

- ☒ a. tends to be decreased in pulmonary disease
- ☐ b. enhances erythrocytes production under hypoxic condition
- ☐ c. its rate of production increases when a person is placed at high altitude.
- ☐ d. its administration is helpful in treatment of anemia associated with renal failure

Clear my choice

The action potential

- ☐ a. its duration in sinoatrial node is shorter than in nerves.
- ☐ b. is generated in postsynaptic neuron at a high threshold initial segment.
- ☐ c. is associated with a transient decrease in membrane permeability to sodium.
- ☒ d. its magnitude does not vary with increasing stimulus strength.

[Clear my choice](#)

Temporal summation means summation of many presynaptic terminals EPSPs simultaneously to generate action potential

- ☒ a. False
- ☐ b. True

[Clear my choice](#)

In skeletal muscle one statement is incorrect

Isometric muscle contraction differs from isotonic contraction in being

- ☐ a. has constant muscle tension.
- ☐ b. has decreasing muscle tension.
- ☐ c. its duration increases in muscles with fast contraction.
- ☒ d. occurs when the force of muscle contraction is lesser than the load.

[Clear my choice](#)

Stick of neutrophils to adhesion molecules of endothelium is called diapedesis

- ☒ a. False
- ☐ b. True

[Clear my choice](#)

Excitatory postsynaptic potential is all or non-law potential

- ☒ a. True
- ☐ b. False

[Clear my choice](#)

Fast fibers have a lower levels of oxidative metabolism than slow fibers

- ☐ a. False
- ☒ b. True

[Clear my choice](#)

RBC appears biconcave rather than spherical in hereditary spherocytosis

- ☒ a. False
- ☐ b. True

[Clear my choice](#)

Basophils are expected to be increased in parasitic infection

- ☐ a. True
- ☒ b. False

[Clear my choice](#)

The most numerous cells in normal human blood are

Plateau in cardiac muscle coincides with depolarization stage



- ☒ a. True
- ☐ b. False

Clear my choice

Cytokines cause invasion of neutrophils to the inflamed area

- ☐ a. False
- ☒ b. True

Clear my choice

The resting membrane potential of a neuron

The most numerous cells in normal human blood are

- ☐ a. neutrophils.
- ☐ b. monocytes.
- ☐ c. lymphocytes.
- ☒ d. red blood cells.

[Clear my choice](#)

GABA receptors make their inhibitory action through Cl^- influx or K^+ efflux

- ☒ a. True
- ☐ b. False

Clear my choice

GABA is synthesized in cell bodies and then transported to axon terminals

- ☒ a. False
- ☐ b. True

Clear my choice

In skeletal muscle one statement is incorrect

- ☐ a. sarcoplasmic reticulum has a voltage gated dihydropyridine receptors.
- ☐ b. Gastrocnemius muscle has isometric duration more than ocular muscle.
- ☐ c. Motor unit is all the muscle fibers innervated by a single nerve fiber.
- ☒ d. muscle tetanization means rapid successive contraction with partial relaxation.

[Clear my choice](#)

Metabotropic receptor

- ☐ a. acts through ligand-gated ion channels.
- ☐ b. is not a glutamate receptor
- ☐ c. Unlike N-methyl D-aspartate (NMDA) receptor is believed to be involved in memory.
- ☒ d. acts through G-protein second messenger system.

[Clear my choice](#)

Next

Superoxide (O_2^-) radicals are bactericidal agents released from both neutrophils and macrophages

- ☐ a. False
- ☒ b. True

Clear my choice

Hemoglobin

- ☐ a. has abnormal α chains in sickle cell anemia.
- ☐ b. its affinity to oxygen is lesser in fetus than in mother.
- ☐ c. its affinity to oxygen is increased in a person living at high altitude
- ☒ d. its affinity to oxygen decreased with increased CO_2 in tissue

Clear my choice

RBC appears biconcave rather than spherical in hereditary spherocytosis

N-methyl D- aspartate (NMDA) receptor

- ☐ a. is a not a glutamate receptor.
- ☒ b. acts through ligand-gated ion channel.
- ☐ c. is inhibited by the presence of glycine.
- ☐ d. Unlike metabotropic receptor is believed to be involved in memory.

[Clear my choice](#)

Atropine blocks the action of acetylcholine on nicotinic receptors

- ☐ a. True
- ☒ b. False

[Clear my choice](#)

In skeletal muscle

- ☐ a. Fast fibers have large number of mitochondria to supply energy for contraction.
- ☐ b. All cross-bridges work simultaneously to give strong contraction.
- ☒ c. Force of contraction is proportional to number of cross-bridges in contact with actin.
- ☐ d. The major source of energy is glycolysis.

[Clear my choice](#)

One statement about Na^+/K^+ Pump is incorrect

- ☐ a. differs from facilitated diffusion in being needs energy.
- ☒ b. differs from facilitated diffusion in being depend on carrier protein.
- ☐ c. acts as an active electrogenic pump.
- ☐ d. has a minor role in maintaining resting membrane potential.

[Clear my choice](#)

Neutrophils differ from macrophages in being

- ☐ a. phagocytize larger number of bacteria
- ☐ b. have the ability to engulf much larger particles
- ☐ c. their lysosomes do not contain lipase enzymes
- ☒ d. have more powerful phagocytic activity

Clear my choice



Parasympathetic nervous system

- ☐ a. inhibits the secretion of adrenal medulla.
- ☐ b. dilates bronchi of lungs.
- ☐ c. tends to have longer postganglionic than preganglionic axons.
- ☒ d. releases acetylcholine at both pre- and postganglionic axons.

Clear my choice



Second macrophage invasion into inflamed tissue provides a second line of defense

- ☒ a. False
- ☐ b. True

Clear my choice