

.Cell signaling is a process by which cells communicate

:

a.True

b.Fals

cAMP and cGMP are derived from

:Select one

.a

ATP and GTP by the actions of adenylate cyclase and guanylate cyclase respectively

.b

GTP and ATP by the actions of adenylate cyclase and guanylate cyclase respectively

.c

ATP and GTP by the actions of guanylate cyclase and adenylate cyclase respectively

.d

none of the above

Cell signaling can be classified into

:Select one

.a

three distinct types based on the distance over which the signaling molecules act

.b

two distinct types based on the distance over which the signaling molecules act

.c

three distinct types based on the signaling molecules

.d

none of the above

Cell signaling can be classified into

:Select one

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فضل لاجب بالقرآن

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.b

two distinct types based on the distance over which the signaling molecules act

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.d

none of the above

Given these events: 1. alpha subunit binds to adenylyl cyclase 2. cAMP is produced 3. cAMP binds to protein kinase 4. phosphate groups are attached to enzymes 5. phosphodiesterase breaks down cAMP Arrange them in the correct order as they occur after the G protein dissociates

:Select one

.a

1,3,2,5,4

.b

2,3,5,4,1

.c

3,4,1,2,5

.d

5,4,3,2,1

.e

1,2,3,4,5

.Protein kinases and phosphatases act by altering \_\_\_\_\_ of the signaling proteins

:Select one

.a

basicity

.b

conformation

.c

acidity

.d  
size

elf-phosphorylation is an excellent mechanism for triggering specific catalytic function of the proteins involved in signal cascades because it  
:Select one

☒ .a  
changes the shape and thus the enzymatic activity of the proteins involved

.b  
makes the receptor more likely to capture the signaling, molecule

.c  
allows hydrophilic signaling molecules to cross the plasma membrane

.d  
None of the above

?Which of the following is not a type of signaling molecule  
:Select one

.a  
Testosterone

.b  
Insulin

.c  
Thyroxin

☒ .d  
Adenylate cyclase

.Name the signaling which requires physical contacts between the cells involved  
:Select one

.a  
Paracrine signaling

.b

Intracellular signaling

.c

Autocrine signaling

.d

Juxtacrine signaling

In the sliding filament model of muscle contraction, the myofilaments slide over each other, \_\_\_\_\_ resulting in the overlapping of actin and

.a

troponin

.b

thin filaments

.c

tropomyosin

.d

myosin

.e

actin

\_\_\_\_\_ The space between the neuron and the muscle is the

.a

synaptic knob

.b

M line

.c

motor end plate

.d

motor unit

.e

synaptic cleft

:Depolarization

.a

.is associated with increase in membrane permeability to Na

.b

.is followed by muscle relaxation

.c

.is caused by K<sup>+</sup> efflux

.d

.is terminated with closure of voltage activated K<sup>+</sup> channels

?Which of the following does NOT occur during skeletal muscle contraction

.a

.Myosin heads bind to actin

.b

.The I bands shorten and H zones disappear

.c

.ATP is hydrolyzed

.d

.Calcium concentration in the sarcoplasm increases

.e

.Calcium binds to myosin heads

:The ends of the actin filaments are anchored (attached) to the

.a

Sarcoplasmic reticulum

.b

Perimysium

.c

Z-line

.d

M-line

:The ends of the actin filaments are anchored (attached) to the

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.d

M-line

:The resting membrane potential is caused by

.a

.Opening of the voltage activated ion channels

.b

.Diffusion of  $\text{Na}^+$  ions inside the nerve fibers

.c

.ions outside the nerve fibers

.d

+Diffusion of K

.e

.Opening of the chemically activated ion channels

Question 8

Not yet answered

Marked out of 1.0

Not flaggedFlag question

Question text

:When a muscle fiber shortens, the following also shortens

:When a muscle fiber shortens, the following also shortens

.a  
Actin filament

.b  
Z-line

.c  
Myosin filament

.d  
Sarcomere

:The resting membrane potential is caused by

.a  
Opening of the voltage activated ion channels

.b  
Diffusion of  $\text{Na}^+$  ions inside the nerve fibers

.c  
ions outside the nerve fibers

.d  
+Diffusion of K

.e  
Opening of the chemically activated ion channels

:During depolarization

.a  
voltage activated  $\text{Na}^+$  channels open

.b  
. $\text{K}^+$  ions diffuse outside

.c  
when membrane potential reaches  $-55 \text{ mV}$   $\text{Na}^+$  &  $\text{K}^+$  fluxes occur at the same time

.d  
+the membrane becomes impermeable to Na

.\_\_\_\_\_ A sarcomere is part of aNo

.a  
endomysium

.b  
perimysium

.c  
myofilament

.d  
myofibril

?Which of the following statement is correct

:Select one

.a  
Cell communicate with one another in multicellular organisms using extracellular signaling molecules or hormones

.b  
Cell communicate with one another in unicellular organisms using extracellular signaling antigen and antibody

.c  
Cell communicate with one another in multicellular organisms using intracellular signaling molecules only

.d  
Cell communicate with one another in unicellular organisms using intracellular signaling antigen and antibody

?Which of the following comes under the category of cell surface receptor

:Select one

.a  
Enzyme linked receptors

.b  
Ion-channel linked receptors

.c

G protein linked receptors

☒ .d

All of these

If phosphorylation (of ATP or GTP) did not occur, what would happen

:Select one

☐ .a

The ligand would bind, and the signaling pathway would proceed through transduction to cellular response

☒ .b

The ligand would bind, but the signaling pathway would not proceed through the transduction step

☐ .c

The ligand would bind and the signaling pathway would proceed through the transduction step, but would not produce a cellular response