



BIOLOGY

BOOKS - KVPY PREVIOUS YEAR

MOCK TEST 4

Exercise

1. If you could selectively neutralise the active transport mechanisms at the axon terminals

of a neuron, which of the following processes would you most significantly impact?

A. Fusion of synaptic vesicles with the presynaptic membrane.

B. Uptake of released neurotransmitter by the presynaptic cell

C. Operation of voltage-gated potassium channels.

D. Release of calcium within the postsynaptic cell.

Answer:



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2. A person showing unpredictable moods, out-bursts of emotions, quarrelsome behavior and conflicts with others is suffering from

- A. Borderline personality disorder(BPD)
- B. Mood disorders
- C. Addictive disorders
- D. Schizophrenia

Answer:



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3. In human ABO blood group system, there are six possible genotypes but only four phenotypes. An explanation of this is that the ABO blood groups are controlled by

A. one gene locus with three incompletely dominant (co-dominant) alleles.

B. one gene locus with two incompletely dominant (co-dominant) alleles and two recessive alleles.

C. one gene locus with two incompletely dominant (co-dominant) alleles and one recessive allele.

D. two unlinked gene loci each with two alleles, one dominant and one recessive.

Answer:



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4. The leaf colour of certain plants is controlled by one gene. For that gene, the allele G = orange and g = green. You have a plant with orange leaves but do not know whether that plant's genotype is GG or Gg . If you cross your unknown plant with one of the plants whose genotype is listed below, you will be able to determine your unknown's genotype. With which plants would you cross it?

A. GG

B. gg

C. Gg

D. Either of parents

Answer:



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5. Two tubes labelled 'P' and 'Q' contain food stuff. Tube 'P' gave positive test with Benedict's solution while tube 'Q' gave positive

test with Nitric acid. Which of the following is correct ?

A. Tube 'P' contains sugar, tube 'Q' contains protein

B. Tube 'P' contains protein, tube 'Q' contains sugar

C. Both, tube 'P' and tube 'Q' contain sugar

D. Both, tube 'P' and tube 'Q' contain protein

Answer:



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6. Which one of the following is an environment-related disorder with the correct main cause?

A. Black lung disease (pneumoconiosis)

found mainly in workers in stone quarries and crushers.

B. Blue baby

disease(methaemoglobinaemia)due to

heavy use of nitrogenous fertilisers in the area.

C. Non-hodgkin's lymphoma found mainly in workers involved in manufacture of neem based pesticides.

D. Skin cancer mainly in people exposed to benzene and methane.

Answer:



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7. A couple have been trying to conceive a child for over a year without success. Recently, the man's doctor informed him that his seminal vesicles are defective. This means that

A. the man makes functional sperm but they are not delivered because he is unable to ejaculate.

B. the man's sperm lack functional flagella.

C. the fluid needed to lubricate the man's urethra for easier sperm travel is defective.

D. the man's semen lacks the fructose fuel needed for the sperm to swim.

Answer:



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8. Lipids, which can be found in oil based salad dressings and ice cream, during digestion are splitted into

or

The main function of Lacteals in the human small intestine is the absorption of

- A. fatty acids and glycerol
- B. glycerol and amino acids
- C. glucose and fatty acids
- D. glucose and amino acids

Answer:



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9. Expression vectors are different from other vectors because they

A. contain drug resistance markers.

B. contain telomeres.

C. contain regulatory regions that permit the cloned DNA to produce a gene

product.

D. contain origin of DNA replication.

Answer:



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