



BIOLOGY

BOOKS - KVPY PREVIOUS YEAR

MOCK TEST 7

Exercise

1. The brachial plexus are formed by which of the following spinal nerves?

A. IV,V,VI cervical

B. V, VI, VII,VIII cervical and I thoracic

C. IV to VII lumbar

D. First three sacral

Answer:



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2. Drugs that alter the permeability of the plasma membrane of a neuron have which of

the following effects on nerve impulse conduction?

- A. They prevent movement of sodium and potassium ions into and out of the cell, thereby stopping the transmission of the impulse.
- B. They primarily affect conduction along the axon.
- C. They prevent the release of neurotransmitters at synapses.

D. All of the above

Answer:



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3. Cyclic and non-cyclic electron flow is used in plants to

A. meet the ATP demands of the Calvin Benson cycle.

B. avoid

producing

excess



C. balance ATP and $NADPH + H^+$ ratios

in the chloroplast.

D. All of the above

Answer:



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4. At the zoo, Ratan saw a species of primate. He had never even heard of before. He said, it was called a white-faced saki. It had long, dark, spiky fur, a long fluffy tail, forward-facing brown eyes, a white forehead, and yellow cheeks. Based on this information, the white-faced saki could not be a :

A. Ape

B. Prosimian

C. New World monkey

D. Old World monkey

Answer:



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5. In our society women are blamed for producing female children. Choose the correct answer for the sex- determination in humans

A. This is due to some defect in the women.

B. This is due to some defect like aspermia in man.

C. This is due to the genetic make up of the particular sperm which fertilises the egg.

D. This is due to the genetic makeup of the egg.

Answer:



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6. If there are 120 adenine molecule in abDNA double helical structure showing 20 coils, what is the number of pyrimidine nucleotides forming three hydrogen bonds in it

A. 80

B. 100

C. 120

D. 140

Answer:



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7. Menthyl guanosine triphosphate is added to the 5' end of hnRNA in a process of

- A. Splicing
- B. Capping
- C. Tailing
- D. None of these

Answer:



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8. Patients with HIV are susceptible to a variety of infections because

A. the virus produces cell surface receptors that bind to pathogens, making it easier for those pathogens to be infective.

B. synthesising a DNA copy of the viral genome makes a person feel sick.

C. HIV attacks and destroys the T helper cells, which are central to mounting an

effective immune response, making those individuals more susceptible to other infections.

D. HIV destroys B cells so that antibodies cannot be made in response to invading pathogens.

Answer:



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9. Significance of 'heat shock' method in bacterial transformation is to facilitate

A. binding of DNA to the cell wall with the help of proteins.

B. uptake of DNA through membrane transport proteins.

C. uptake of DNA through transient pores in the bacterial cell wall.

D. expression of antibiotic resistance gene.

Answer:



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10. The endosperm found in angiospermic seed is different from that of gymnosperms in the sense that, in the former

- A. it is formed before fertilisation while in the latter it is formed after fertilisation.
- B. it is formed after fertilisation.

C. it is cellular while in the latter it is nuclear.

D. it is nutritive while in the latter it is protective.

Answer:



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11. Basically a verticillaster inflorescence is a type of:

A. Cymose

B. Racemose

C. Raceme

D. Panicle

Answer:



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12. In human, attached earlobes are a dominant feature over free earlobes while hypertrichosis (Y-linked) feature. A man with

attached earlobed and extensive hair on pinna
married a woman having free earlobes. The
couple had one son with free earlobes and
hairy pinna and two daughters with attached
earlobes. One of the daughters with attached
earlobes. One of he daughters married a man
with free earlobes and sparse hair on pinna.
They had two sons. What would be the
characteristics of their ponnae ?

A. There would be equal chances for both
having free or attached earlobes and
sparse hair on pinnae.

B. They would have hairy pinnae and there would be 1 in 8 chance that both will have attached earlobes.

C. There is an equal chance for the two to have either hairy pinnae or sparse hair on pinnae.

D. Both will have free earlobes and extensive hair on pinnae.

Answer:



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13. Many molecules are chiral i.e., their mirror images are non-superimposable. Which of the following could be affected if the chirality of a molecule is changed in a biological system? (i) Taste reception (ii) Smell perception (iii) Toxicity (iv) Mode of action

A. (i) and (ii)

B. (i),(ii)and(iii)

C. (iii)and(iv)

D. (i),(ii),(iii)and(iv)

Answer:



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