



BIOLOGY

BOOKS - KVPY PREVIOUS YEAR

MOCK TEST 8

Exercise

1. Thousand of years old mummies are still in condition as they were before due to non-destruction of

A. Yellow elastin fibres

B. White elastin fibres

C. Collagen fibres

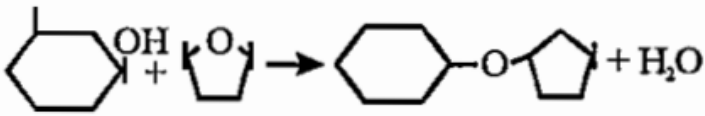
D. Veins

Answer:



Watch Video Solution

2. Which kind of reaction is shown by the following diagram?



- A. Hydrolysis
- B. Dehydration
- C. Denaturation
- D. Hydration

Answer:



Watch Video Solution

3. Through negative feedback, a hormone may shut off the secretion of an anterior pituitary hormone by

A. stimulating the release of a (hypothalamic) releasing hormone.

B. inhibiting the release of a (hypothalamic) inhibiting hormone.

C. inhibiting the release of a (hypothalamic) releasing hormone.

D. All of the preceding.

Answer:



Watch Video Solution

4. If the haploid number in a flowering plant is 14. What shall be the number of chromosomes in integuments, antipodal cells, embryo, endosperm and nucellus respectively?

A. 14,28,7,42,21

B. 7,14,42,28,14

C. 28,14,28,42,28

D. 42,28,14,28,14

Answer:



Watch Video Solution

5. Which of the following is not a goal of the human genome project?

A. To sequence 3 billion chemical base pairs

that make up human DNA.

B. To eliminate all diseases.

C. To consider social, ethical and legal aspects of genetic information.

D. To develop computational tools for analysing sequence information.

Answer:



Watch Video Solution

6. In humans, the hormone testosterone enters cells and binds to specific proteins, which in

turn bind to specific sites on the cell's DNA.

These proteins probably act to

A. help RNA polymerase to transcribe certain genes.

B. alter the pattern of DNA splicing

C. stimulate protein synthesis.

D. unwind the DNA so that its genes can be transcribed

Answer:



Watch Video Solution

7. During photosynthesis when PGA is changed into phosphoglyceraldehyde, which of the following reaction occur

- A. Oxidation
- B. Reduction
- C. Electrolysis
- D. Hydrolysis

Answer:



Watch Video Solution

8. A particular disease of the nervous system specifically involves the Ca^{2+} ion channels at the chemical synapses of motor neurons where neurotransmitter is stored and released. In other words, this disease affects the

A. axon terminals of the presynaptic cell and the release of acetylcholine

B. axon terminals of the postsynaptic cell

and the release of K^+ ions.

C. electrical synapses.

D. axon terminals of the presynaptic cell

and the release of K^+ ions.

Answer:



Watch Video Solution

9. It is important that certain free ribosomes bind to the outer surface of the endoplasmic reticulum (ER) in order to complete their protein synthesis because

A. ER membrane will break down without the presence of numerous ribosomes.

B. it allows the synthesis of certain proteins to be completed in the cytosol.

C. it prevents the possibility that the synthesis of certain proteins, such as

lysosomal hydrolases, would go to completion in the cytoplasm.

D. mitochondrial ribosomes must transcribe proteins encoded for by mitochondrial DNA in this manner.

Answer:



Watch Video Solution

10. Which group of three of the following five statements (1-5) contain all three correct statements regarding beri-beri

1 . A crippling disease prevalent among the native population of sub-Saharan Africa

2. A deficiency disease caused by lack of thiamine (vitamin B_1)

3. A nutritional disorder in infants and young children when the diet is persistently deficient in essential protein

4 . Occurs in those countries where the staple diet is polished rice

5 . The symptoms are pain from neuritis , paralysis , muscle wasting , progressive oedema mental deterioration and finally heart failure .

A. (ii),(iv)and(v)

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

C. (i),(iii) and (v)

D. (ii),(iii) and(v)

Answer:



Watch Video Solution

11. Match column-I with column-II and select the correct answer using the codes given below.

Column-I	Column-II
A. Sicklecell anaemia	I. 7 th chromosome
B. Phenylketonuria	II. 4 th chromosome
C. Cystic fibrosis	III. 11 th chromosome
D. Huntington's disease	IV. X chromosome
E. Colour blindness	V. 12 th chromosome

A. A-II,B-I,C-IV,D-III,E-V

B. A-V,B-I,C-II,D-III,E-IV

C. A-IV,B-II,C-I,D-III,E-V

D. A-III,B-V,C-I,D-II,E-IV

Answer:



Watch Video Solution

12. In a population of 1000 individuals 360 belong to genotype AA, 480 to Aa and the remaining 160 to aa. Based on this data, the frequency of allele A in the population is

A. 0.4

B. 0.5

C. 0.6

D. 0.7

Answer:



Watch Video Solution

13. Read the following statements and identify the correct statements about S phase (synthetic phase)? (i) It occurs between G_1 and G_2 . (ii) It marks the period during which DNA replicates. (iii) At the end of this phase, DNA is doubled but the number of

chromosomes remains unchanged. (iv) As the DNA is doubled in this phase, number of chromosomes is also doubled. (v) Centrioles replicate in this phase. (vi) Amount of DNA changes from 2C to 4C. (vii) It is pre G_2 and post G_1 phase.

A. (i),(ii),(iv),(v),(vi) and (vii)

B. (i),(ii),(iii),(v),(vi) and (vii)

C. All of the above

D. Only (iv)

Answer:



Watch Video Solution

14. Which of the following changes occur in ECG during myocardial infarction?

- A. Flattened T wave
- B. Depressed ST segment
- C. Elevated ST segment
- D. Increased length of PQ interval

Answer:



15. Correct sequence of layer of bacterial cell envelope from outward to inward is

A. Cell wall → Glycocalyx → Cell membrane

B. Cell membrane → Glycocalyx → Cell wall

C. Glycocalyx → Cell wall → Cell membrane

D. Glycocalyx → Cell membrane → Cell

wal

Answer:



Watch Video Solution

16. If the initial number of template DNA molecules in a PCR reaction is 1000, the number of product DNA molecules at the end of 20 cycles will be closest to:

A. 10^3

B. 10^6

C. 10^9

D. 10^{12}

Answer:



Watch Video Solution

17. If the frequency of an autosomal dominant allele is 0.6, what will be frequency of recessive phenotype in a population of 10,000?

A. 1200

B. 1600

C. 800

D. 1000

Answer:



Watch Video Solution