



BIOLOGY

BOOKS - KVPY PREVIOUS YEAR

MOCK TEST 9

Exercise

1. A cell at telophase stage is observed by a student in a plant brought from the field. He tells his teacher that this cell is not like other

cells at telophase stage. There is no formation of cell plate and thus the cell is containing more number of chromosomes as compared to other dividing cells. This would result in

- A. Aneuploidy
- B. Polyploidy
- C. Somaclonal variation
- D. Polyteny

Answer:



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2. A biologist intends to use a polymerase chain reaction to perform a genetic task. The biologist probably is trying to

- A. discover new genes.
- B. clone a gene.
- C. cut DNA into many small fragments.
- D. isolate DNA from a living cell.

Answer:



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3. Seventh cranial nerve enters:

- A. Jugular ganglion
- B. Geniculate ganglion
- C. Gasserian ganglion
- D. Femoral ganglion

Answer:



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4. Oxygenated blood flowing in umbilical cord of mammalian embryo is:

- A. 50% maternal and 50% foetal
- B. 100% maternal
- C. 100% foetal
- D. 75% maternal and 25% foetal

Answer:



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5. Which option is correct for the amino acid and the total number of their genetic code

A. Val=6,Pro=6

B. Arg=6, His=6

C. Pro=4,Thr=4

D. Thr=4,Arg=4

Answer:



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6. Which of the following is correct for immunomodulators?

A. They always suppress immune system

B. They never suppress immune system.

C. They always stimulate immune system.

D. Specific immunomodulators stimulate the immunoresponse of immune system, whereas some other immunomodulators inhibit it.

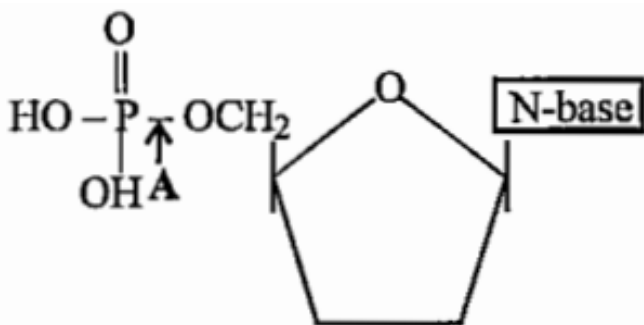
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7. Refer the given structure of adenylic acid.

Identify A in given structures.



- A. Glycosidic bond
- B. Phosphate bond
- C. phosphoEster bond

D. Ionic bond

Answer:



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8. A triplet base sequence in DNA reads ATT. What will be the corresponding mRNA codon, tRNA anticodon, and amino acid called by this DNA?

A. TAA, UTT, methionine

B. TAA, AUU, no amino acid (= stop codon)

C. UAA, AUU, no amino acid (= stop codon)

D. CGG, GCC, alanine

Answer:



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9. Examples of essential aminoacids are:

A. Lys, Gly, Trp, Val

B. His, Val, Lys, Trp

C. Phe,Glu,Met,Ala

D. Ala,Arg,Asn,Pro

Answer:



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10. Alpha-keratin is a protein, present in

A. Blood

B. Skin

C. Lymph

D. Eggs

Answer:



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11. What would happen if in a gene encoding a polypeptide of 50 amino acids, 25th codon (UAU) is mutated to UAA ?

A. A polypeptide of 25 amino acids will be formed.

B. A polypeptide of 24 amino acids will be formed.

C. Two polypeptides of 24 and 25 amino acids will be formed.

D. A polypeptide of 49 amino acids will be formed.

Answer:



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12. Which of the following step of translation does not consume a high energy phosphate bond

A. Translocation.

B. Amino acid activation.

C. Peptidyl-transferase reaction.

D. Aminoacyl tRNA binding to active ribosomal site.

Answer:





13. Post-transcriptional regulation includes

- A. binding of repressor on silencer regions
- B. transport of messenger RNA into the cytoplasm.
- C. decreasing messenger RNA stability in the cytoplasm.
- D. Both (b) and (c)

Answer:



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14. The F_2 generation of a cross produced identical phenotypic and genotypic ratio. It is not an expected Mendelian result, and can be attributed to:

A. Independent assortment

B. Linkage

C. Incomplete dominance

D. None of these

Answer:



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15. Match column-I with column-II and choose the correct option.

Column-I		Column-II	
(Immunity)		(Examples)	
A.	Natural active	I.	From mother to foetus through placenta
B.	Artificial passive	II.	Immunity developed by heredity
C.	Artificial active	III.	Induced by vaccination
D.	Natural passive	IV.	Fighting infection naturally
		V.	Injection of antiserum to travellers

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

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

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

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

Answer:



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16. Which of the face of Golgi complex is associated with ER?

- A. Forming face i.e., Trans face
- B. Maturing face i.e., Trans face
- C. Both forming and maturing face
- D. Forming face or C is face

Answer:



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17. A mouse carrying two alleles of insulin-like growth factor II (IgF2) is normal in size, whereas a mouse that carries two mutant alleles lacking the growth factor is dwarf. The size of a heterozygous mouse carrying one normal and one mutant allele depends on the parental origin of the wild type allele. Such pattern of inheritance is known as:

- A. Sex-linked inheritance
- B. Genomic imprinting
- C. Gene-environment interaction
- D. Cytoplasm inheritance

Answer:



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18. An organism uses 20 amino acids while its DNA is made up of 6 types of nitrogenous

bases. What would be the minimum size of a codon ?

A. 6

B. 4

C. 3

D. 2

Answer:



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