

## Unit 6 Quiz

### True False Questions

Indicate True or False for the following Statements.

1. A small, circular piece of DNA in a prokaryotic cell is called a cosmid. ( True/False )
2. The placement of the nucleus from one cell into an unfertilized egg cell is known as cell culture. ( True/False )
3. Proteins are made of chains of nucleotides. ( True/False )
4. The genetic material is made of protein. ( True/False )
5. The DNA double helix is held together by covalent bonds between the two strands. ( True/False )
6. According to Chargaff's Rules, in any particular species, the amount of adenine is equal to the amount of thymine. ( True/False )
7. mRNA is copied from tRNA. ( True/False )
8. Thymine is present in RNA. ( True/False )
9. Transcription takes place in the cytoplasm. ( True/False )
10. Regions that do not code for proteins are introns. ( True/False )
11. The site of translation is the ribosome. ( True/False )

### Short Answer Questions

Fill in the answer blanks with correct answer.

12. \_\_\_\_\_ brings the correct amino acids to the ribosome.

Answer:

### Multiple Choice Questions

For each question, four alternative choices are given, of which only one is correct. You have to select the correct alternative and mark it in the appropriate option.

13. The step in gene cloning in which the recombinant DNA is inserted into a living cell, usually a bacterial cell, is \_\_\_\_\_.
- a. Selection
  - b. Transformation
  - c. Isolation
  - d. Ligation
14. Animals that have had their DNA manipulated to possess and express an extra (foreign) gene are known as:
- a. Transgenic animals
  - b. Transformed animals
  - c. New animals
  - d. None of the above
15. The sequence of three bases in tRNA that corresponds to the three bases of the codon on the mRNA is known as \_\_\_\_\_.
- a. Codon
  - b. Anticodon
  - c. Nucleotides

- d. None of the above
16. Which of the following occurs during translation?
- DNA replication
  - Messenger RNA is produced
  - A new strand of DNA is synthesized
  - Codons pair with anticodons
17. Where in the eukaryotic cell is DNA stored?
- nucleus
  - cell membrane
  - ribosomes
  - cytoplasm
18. The components of DNA are phosphate and \_\_\_\_\_.
- Deoxyribose, pyrimidines, purines
  - Ribose ,nucleotides
  - Nucleotides
  - Ribose, pyrimidines
19. What sugar is present in DNA?
- Ribose
  - Sucrose
  - Glucose
  - Deoxyribose
20. What occurs to a DNA strand during DNA replication?
- The DNA strand is shortened.
  - The DNA strand is lengthened.
  - The DNA strand is copied.
  - The DNA strand is deleted.
21. DNA replicates through
- semiconservative replication
  - conservative replication
  - dispersive replication
  - all of the above
22. What molecule carries amino acids to ribosomes?
- tRNA
  - DNA
  - mRNA
  - rRNA
23. In tRNA, t stands for \_\_\_\_\_.
- Transcription
  - Transfer
  - Termination
  - None of the above
24. What does 'm' stand for in mRNA?

- a. Messenger
  - b. Membrane
  - c. Molecular
  - d. None of the above
25. The \_\_\_\_\_ carries the genetic instructions to the ribosome for protein synthesis.
- a. cell
  - b. nucleus
  - c. RNA molecule
  - d. DNA molecule
26. What is the complementary coding sequence of CGATTACAG, produced as a result of transcription?
- a. CGAUUACAG
  - b. CGTUUTCTG
  - c. GCTAATGTC
  - d. GCUAAUGUC
27. Protein synthesis is also known as \_\_\_\_\_.
- a. Transcription
  - b. Translation
  - c. Transformation
  - d. None of the above
28. The ribosomes read the sequence of codons in \_\_\_\_\_.
- a. mRNA
  - b. tRNA
  - c. rRNA
  - d. All of the above