

**Avinashilingam Institute for Home Science and Higher Education for Women,
[Deemed to be University] Coimbatore – 641 013**

Bachelor's Degree Examinations – November 2018

III Semester

**Class: II UG
Major: Zoology**

**Time: 3 hrs
Marks: 100**

15BZOC08 Molecular Biology

Part – A

10x1=10

Choose the correct answer

1. Bacterial transformation is otherwise called as
a. Griffith effect b. Self duplication c. Transduction d. Conjugation
2. The term "gene" was coined by
a. Robert brown b. Robert hook c. Johansson d. Edward
3. The double stranded DNA has right handed helix
a. A- DNA b. B- DNA c. RL- DNA d. Z- DNA
4. Which of the following is not a character of A DNA?
a. Short and broad b. Left handled helix
c. Narrow minor groove d. Broad and shallow major groove
5. Semi conservative nature of replication of eukaryotic chromosome was first demonstrated by
a. Walter Flemming b. J. Herbert Taylor c. Robert d. Philip Wood
6. Which of the following does not affect DNA replication?
a. Antiparallel nature of DNA b. End specificity of polymerase
c. SSB protein d. Helicase
7. In the case of a circular DNA synthesis how many replication forks are observed?
a. 1 b. 2 c. 3 d. 4
8. RNA formation takes place in
a. Cytoplasm b. Golgi complex c. Endoplasmic reticulum d. Nucleus
9. In eukaryotic cell, transcription occur in
a. Nucleus b. Mitochondria c. Plastids d. All the above
10. Codons are called as
a. Triplet b. Triples c. Single d. Doubles

Part - B

5X6=30

Answer the Following

Answer should not exceed 400 words or two pages

- 11.a. Illustrate about bacteriophage infection.
(or)
- 11.b. Illustrate about bacterial conjugation.
- 12.a. What is DNA? Explain the types of DNA
(or)
- 12.b. Explain about the super coiling of DNA.
- 13.a. Write about the basic requirements of DNA synthesis.
(or)
- 13.b. Mention briefly on inhibitors of DNA replication.
- 14.a. Explain the types of RNA.
(or)
- 14.b. Write about the basic functions of RNA synthesis.
- 15.a. Explain the post translational modifications of protein biosynthesis.
(or)
- 15.b. Write about the inhibitors of protein synthesis.

Part - C

5X6=30

Answer the Following

Answer should not exceed 800 words or four pages

- 16.a. Explain any three evidences for DNA genetic material.
(or)
- 16.b. Elucidate the bacterial transformation.
- 17.a. Illustrate the detailed structure of DNA. Add notes on its properties.
(or)
- 17.b. Write in detail about the alternative forms of DNA.
- 18.a. Give a detailed account on proteins associated with DNA replication.
(or)
- 18.b. Explain the mechanism of DNA replication in Eukaryotes.
- 19.a. Detail about the structure of RNA. Mention the post transcriptional modifications of RNA
(or)
- 19.b. Elaborate the steps involved in RNA synthesis.
- 20.a. What is genetic code? Explain its salient features.
(or)
- 20.b. Give an account on protein synthesis.