

**Avinashilingam Institute for Home Science and Higher Education for Women,
Coimbatore – 641043
Bachelor's Degree Examination – November 2017
III Semester**

**Class : II UG
Major : Zoology**

**Time : 3hrs
Max. Marks : 100**

**15BZOC08 Molecular Biology
Part – A
Choose the correct answer**

10X1=10

1. Among the following the puring base is
a. Adenine b. Cytosine c. Thymine d. Uracil
2. Watson and Crick designed the structure of DNA in
a. 1943 b. 1953 c. 1963 d. 1973
3. Transfer of genetic material from one bacterium to another through bacteriophage is
a. conjugation b. Transcription c. Translation d. Transduction
4. DNA is
a. Left handed double helix b. Right handed double helix
c. Left handed single helix d. Right handed single helix
5. DNA replication occurs during
a. prophase b. Metaphase c. Anaphase d. Interphase
6. The length of RNA primer in prokaryotes is -----nucleotides
a. 20 b. 30 c. 40 d. 50
7. t RNA is composed of ----- arms
a. 3 b. 4 c. 5 d. 6
8. Transcription takes place within
a. Nucleus b. Cytoplasm c. Mitochondria d. Lysosome
9. Pick out the initiation codon from the following
a. UAA b. UAG c. CUU d. AUG
10. Phenomenon in which a single amino acid is specified by many codons is
a. Polarity b. Non-overlapping c. Degenaracy d. Linearity

PART-B

5x6=30

Answer the following

Answer should not exceed 400 words or two pages

11. a) Discuss the evidences for RNA as genetic material.
(Or)
11. b) Write short notes on the bacterial conjugation.

: 2 :

12. a) Write a brief account on Chemistry of DNA.

(Or)

12. b) Explain the alternative forms of DNA.

13. a) Describe the enzymology and proteins associated with DNA replication.

(Or)

13. b) Comment on the inhibitors of DNA replication.

(Or)

14. a) Explain the different steps in RNA synthesis.

(Or)

14. b) Write a brief account on the inhibitors of transcription.

(Or)

15. a) Analyse the steps involved in protein synthesis.

(Or)

15. b) List out the inhibitors of protein synthesis.

Part-C

5x12=60

Answer the following

Answer should not exceed 800 words or four pages

16. a) Write detailed account on Giffh effect to prove DNA is genetic material.

(Or)

16. b) Describe the nature of genetic material in detail.\

17. a) Describe the Watson and crick model of DNA.

(Or)

17. b) Elucidate the repeated and unusal structures of DNA sequence.

18. a) Explain the semi-conservative method of DNA replication.

(Or)

18. b) Illustrate the basic requirements for DNA replication.

19. a) Explain the types of RNA with relevant sketches.

(Or)

19. b) Explain the post transcriptional modifications of RNA.

20. a) Examine the salient features of genetic code.

(Or)

20. b) Write a detailed account on the deciphering genetic code.
