

**C. ABDUL HAKEEM COLLEGE (AUTONOMOUS),
MELVISHARAM - 632 509.
SEMESTER EXAMINATIONS, NOVEMBER - 2018**

**B.Sc., BIOCHEMISTRY
SEMESTER V
U14MBC502 – GENETICS AND MOLECULAR BIOLOGY**

Time: Three Hours

Maximum: 75 Marks

SECTION - A (10 X 2 = 20 Marks)

Answer **ALL** Questions.

Write short notes on the following:

1. Alleles.
2. Law of independent assortment.
3. Okazaki fragment.
4. STR.
5. Codon.
6. Polycistronic mRNA.
7. Leader sequence.
8. Charged t- RNA.
9. Photolyase.
10. CAP protein.

SECTION - B (5 X 5 = 25 Marks)

Answer **ALL** Questions.

11. a) Brief on Mendel's law of inheritance.
(Or)

b) Explain test cross and back cross. What is their significance?

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12. a) Summarize on the major categories of repeated Sequences.
(Or)
- b) Give an account on Prokaryotic DNA polymerases.

13. a) Discuss the events that lead to termination of transcription in prokaryotes.
(Or)

b) Explain one gene one enzyme hypothesis.

14. a) What are the inhibitors of Protein synthesis?
(Or)

b) Give the composition of prokaryotic and eukaryotic ribosomes.

15. a) Write an account on BER.
(Or)

b) Explain about SOS repair.

SECTION - C (3 X10 = 30 Marks)

Answer **ANY THREE** Questions.

16. Explain about incomplete dominance with example.
17. Brief on the enzymes involved in DNA replication.
18. Explain the steps involved in transcription of RNA in prokaryotes.
19. Describe the nature and characteristics of genetic code.
20. Explain the various types of gene mutation.

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