

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
BSc DEGREE EXAMINATION MAY 2017  
(Third Semester)

MBTO1 0

Branch -BIOTECHNOLOGY

MOLECULAR BIOLOGY

Time : Three Hours .

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10x2 = 20)

- 1 Genetic Switch.
- 2 Transduction.
- 3 Replication fork.
- 4 DNA Polymerase.
- 5 RNA Processing.
- 6 DNA methylation.
- 7 Ames test.
- 8 Spontaneous mutation.
- 9 SOS repair.
- 10 Recomb inase.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks ( 5 x 5 = 25)

- 11 a Explain RNA structure.

OR

- b Give a detailed note on DNA supercoiling.

- 12 a Give a short note on semiconservative replication.

OR

- b Explain DNA polymerase and eukaryotic telomerase.

- 13 a Discuss RNA polymerase.

OR

- b Give a short note on DNA methylation.

- 14 a Give a detailed account on genetic code.

OR

- b Explain mutation in globin gene of humans.

- 15 a Explain SOS repair mechanism.

OR

- b Give a short note on UV repair mechanism.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks ( 3 x 10 = 30)

- 16 Explain double helical structure of DNA.
- 17 Explain chromosome structure in prokaryotes.
- 18 Give a detailed note on lac and trp operon.
- 19 Discuss protein synthesis.
- 20 Explain DNA repair mechanism.