

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019  
(Sixth Semester)

Branch - MICROBIOLOGY

**APPLIED BIOTECHNOLOGY**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks!)**

Answer ALL questions

ALL questions carry EQUAL marks ( 10 x 2 = 20)

- 1 Explants.
- 2 Agro bacterium tumefaciens.
- 3 House keeping genes.
- 4 SMGT.
- 5 Rational design.
- 6 Trade mark.
- 7 Taq polymerase.
- 8 Antistreptolysin-‘o’.
- 9 Hybridoma.
- 10 HGPR T.

**SECTION - B (25 Marks)**

Answer ALL Questions

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

- 11 a Explain in details about insect resistant plants.  
OR  
b Describe in details about Herbicide resistant plants.
- 12 a Write a short notes on embryonic stem cells.  
OR  
b Describe the gene gun method.
- 13 a What are the channels of patenting a microbe?  
OR  
b Write a short note on drug design.
- 14 a Write short note on DNA chips.  
OR  
b Write short note on pedigree analysis.
- 15 a Describe invivo gene therapy.  
OR  
b Describe Exvivo gene therapy.

**SECTION - C (30 Marks)**

Answer any THREE Questions

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

- 16 Elaborate the agro bacterium mediated gene transfer in plants.
- 17 Write a short note on
  - a) Transgenic fish
  - b) Transgenic pig
  - c) Transgenic sheep
- 18 Enlist the different forms of IPR protection.
- 19 Explain the details of Insitu hybridization techniques and its application.