18MBU23

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – **MICROBIOLOGY**

APPLIED BIOTECHNOLOGY

Time: Three Hours | Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1. The first human hormone produced by rDNA technology was
   a. Estrogen b. Growth hormone
   c. Erythropoietin d. Insulin

2. Find out the role of xanthan gum within some liquid formulations
   a. Regulate pH b. Control viscosity
   c. Enhance solubility d. Enhance stability

3. What does M strand for in GM crops with respect to biotechnology?
   a. Moderate b. Multiple
   c. Modified d. Mixed

4. What is the mutation type for ADA deficiency?
   a. Substitution b. Inversion
   c. Deletion d. Insertion

5. The core principle of bioethics are the following except.
   a. Maleficence b. Autonomy
   c. Justice d. Beneficence

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6. a. Explain the process of recombinant interferon production.
   (or)
   b. State about merits and demerits of subunit vaccine.

7. a. Describe the commercial production of PHA by recombinant strain.
   (or)
   b. Illustrate utilization of starch by microbes.

8. a. Comment on plant as bioreactor.
   (or)
   b. Give a brief account on virus resistant plants.

9. a. Elucidate the method for creating transgenic mice.
   (or)
   b. State about applications of DNA microarray.

Cont...

10. a. Prepare a note on deliberate release of GEMO.

(or)

b. How to patenting biotechnological invention.

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11. a. Elaborate steps involved in FMD vaccine, production.

(or)

b. Explain the process of recombinant human growth hormone production.

12. a. Describe and discuss the microbial degradation on Xenobiotics.

(or)

b. Comment on commercial production of Xanthan gum. Add a note on its applications.

13. a. Elaborate the stress and senescence tolerant plants.

(or)

b. Give a brief account on development of herbicide resistant plant.

14. a. Discuss human gene therapy with suitable examples.

(or)

b. Write any two methods for molecular diagnosis of genetic disorders.

15. a. Recombinant DNA technology in food and agriculture - justify

(or)

b. Elaborate biosafety and bioethics.

Z-Z-Z END