

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(Fourth Semester)

Branch – APPLIED MICROBIOLOGY

APPLIED BIOTECHNOLOGY, IPR & BIOETHICS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 A carbon credit is permit representing the right to emit----- Kg CO₂.
(i) 100 (ii) 1000
(iii) 250 (iv) 500
- 2 5-Enolphosphate shikimate-3-phosphate synthase responsible to-----
herbicide resistance.
(i) Atrazine (ii) DDT
(iii) Glyphosate (iv) All of these
- 3 Beta lactoglobulin gene is important for the expression of gene in
(i) Pitutary gland (ii) Mammary gland
(iii) Thyroid gland (iv) Alzheimer
- 4 Which is the first product to get GI tag of India?
(i) Darjeeling Tea (ii) Kashmiri Saffron
(iii) Kanchipuram silk (iv) Kathputlis
- 5 A set of moral principles and standards to regulate the exploitation of biological
resources for human interest is
(i) Bio-safety (ii) GMOs regulation
(iii) Bioethics (iv) Ethics in patient care

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a What is xenobiotics? What makes synthetic polymers resist to biodegradation?
OR
b What is biopolymer? Brief about xanthan production and its uses.
- 7 a How will you produce of insecticide resistant transgenic plants? Explain.
OR
b Write short notes on reporter gene.
- 8 a Explain genetic linkage and gene mapping with suitable example.
OR
b Give the details of human somatic cell gene therapy.

Cont...

- 9 a List the important elements of patentability.
OR
b Draw a Schematic diagram of copyright registration.
- 10 a Define the term bioethical and provide the three examples of bioethical issues.
OR
b What are the ethical implications of stem cell research?

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Enlighten the use of GMOs in cleanup the oil spills.
OR
b Discuss about GMOs regulating bodies and their functions for release of GHGs.
- 12 a Explain about Ti plasmid derived vector system.
OR
b Concise the application of molecular markers in r DNA technology.
- 13 a What you mean by microarray and discuss its field of applications?
OR
b Describe in detail the production of transgenic cattle and its use.
- 14 a Give the details of trade mark and its registration.
OR
b Discuss about patentability of biotechnology inventions in India.
- 15 a Summarize the protocol to transfer biological material across the boarder.
OR
b Explain the major ethical issues related to GMOs.

Z-Z-Z

END