

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2023
(Third Semester)

Branch – ZOOLOGY

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 PCR technique was invented by
(i) Karry Mullis (ii) Boyer
(iii) Sanger (iv) Cohn
- 2 _____ is used as a vector for cloning into higher organisms.
(i) Retrovirus (ii) Baculovirus
(iii) Salmonella typhimurium (iv) Rhizopus nigricans
- 3 The first clinical gene therapy was given in the year of
(i) 2010 (ii) 1990
(iii) 1995 (iv) 2000
- 4 _____ is a natural predator to control the pathogen.
(i) genetic engineering (ii) confusion technique
(iii) artificial control (iv) biological control
- 5 The first transgenic plant was produced in
(i) Brinjal (ii) Tobacco
(iii) Rice (iv) Cotton

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Organize the basic steps involved in Western blotting.
OR
b Discuss the Genomic library.
- 7 a PBR322 is important cloning vector – discuss.
OR
b Explain about Yeast cloning vector.
- 8 a Comment on Human gene therapy.
OR
b Outline the Whole embryo culture.

Cont...

- 9 a Discuss on the merits and demerits of SCP.
OR
b Comment on Biochips.
- 10 a List out the application of biotechnology in medicine.
OR
b Explain the application of biotechnology in food science.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Explain the types of restriction enzymes.
OR
b Describe about molecular finger printing with their application.
- 12 a Explain about Simian virus 40 and its role in biotechnology.
OR
b Summarize the Gene transfer technologies.
- 13 a Elaborate the application of transgenic animal in various field.
OR
b Describe about cryobiology.
- 14 a Differentiate the primary and secondary metabolites with suitable examples.
OR
b Explain the types of bioreactors with neat sketches.
- 15 a Define Biobleaching? Write about the organisms involved and their uses in biobleaching.
OR
b Explain the method of biodegradation of hydrocarbons.

Z-Z-Z

END