

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(Fifth Semester)

Branch - BIOTECHNOLOGY

ENVIRONMENTAL BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|---|---------|-----|
| 1 | 1 | The Biological Diversity Act in India was enacted in a) 1992 b) 1996 c) 2002 d) 2005 | K1 | CO4 |
| | 2 | A foreign chemical substance introduced into an organism that is not naturally produced is known as a) Abiotic b) Xenobiotics c) Antibiotics d) None of the above | K2 | CO2 |
| 2 | 3 | The process of extracting minerals from ores by using microorganisms are called as a) Bioaccumulation b) Bioventing c) Bioleaching d) Biomonitoring | K1 | CO3 |
| | 4 | The natural "cleaning" of the forest floor is primarily carried out by a) Herbivores like deer and rabbits b) Carnivores like wolves and foxes c) Decomposers such as fungi and bacteria d) Large scavengers like bears | K2 | CO1 |
| 3 | 5 | In biomedical waste management, infectious non-sharp waste should be disposed of in which color-coded bag? a) Yellow b) Red c) Blue d) Black | K1 | CO4 |
| | 6 | Which of the following is the most appropriate method for managing biomedical waste? a) Open dumping b) Burning all waste c) Open burning in hospital premises d) Segregation at source and proper treatment | K2 | CO4 |
| 4 | 7 | Which of the following is a type of biodegradable plastic? a) Polyethylene terephthalate (PET) b) Polylactic acid (PLA) c) Polyvinyl chloride (PVC) d) Polypropylene (PP) | K1 | CO3 |
| | 8 | Which of the following is considered a green textile fiber? a) Nylon b) Polyester (non-recycled) c) Polyester (recycled) d) Acrylic | K2 | CO3 |
| 5 | 9 | Which EPA program specifically focuses on reducing greenhouse gas emissions? a) Clean Water State Revolving Fund b) Energy Star Program c) Federal Reserve Program d) National Park Service | K1 | CO4 |
| | 10 | What is the primary objective of a carbon tax? a) To increase fossil fuel consumption b) To reduce carbon emissions by adding a cost to pollution c) To subsidize coal mining d) To measure economic growth | K2 | CO1 |

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|--|---------|-----|
| 1 | 11.a. | Write a short note on metal pollution. | K2 | CO1 |
| | | (OR) | | |
| | 11.b. | Comment on loss of biodiversity. | | |
| 2 | 12.a. | What is bio-mining? Explain it with example. | K3 | CO2 |
| | | (OR) | | |
| | 12.b. | Discuss about carbon credit. | | |
| 3 | 13.a. | Give a brief note on EIA. | K3 | CO2 |
| | | (OR) | | |
| | 13.b. | Outline the importance of bio-indicators. | | |
| 4 | 14.a. | How biofilms are prepared by micro-organisms? | K5 | CO3 |
| | | (OR) | | |
| | 14.b. | Analyze the role of green building concept in view of sustainable development. | | |
| 5 | 15.a. | Elucidate the role of ICUN in environmental protection. | K4 | CO4 |
| | | (OR) | | |
| | 15.b. | Enumerate the Environmental Protection Act. | | |

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|--|---------|-----|
| 1 | 16 | Illustrate the impact Nuclear pollution with a case study. | K4 | CO1 |
| 2 | 17 | Justify the role of phytoremediation and bioremediation in eco-restoration. | K6 | CO2 |
| 3 | 18 | Classify wastes with their impact on environment. | K5 | CO1 |
| 4 | 19 | How biofuels are produced? Add a note on their role climate change. | K6 | CO3 |
| 5 | 20 | Compile the declaration, aim and objectives of human right policies with reference to India. | K4 | CO4 |

Z-Z-Z END