

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(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 x 1 = 10)

- 1 Which one of the following is said to be the most important cause or reason for the extinction of animals and plants?
(i) Over-exploitation of species (ii) Invasion of alien species
(iii) Loss of habitat and fragmentation (iv) All the above
- 2 Which part of India receives rainfall from both the South-West and North-West monsoons?
(i) Andaman Nicobar islands (ii) Tamilnadu
(iii) Lakshadweep islands (iv) Odhisha
- 3 This cleanup approach includes removal of groundwater or soil from its natural setting to permit for bioremediation
(i) Exsitu bioremediation (ii) Insitu bio-remediation
(iii) Phytoremediation (iv) Bioaugmentation
- 4 Where was the first use of nuclear bombs which cause death to the millions of lives?
(i) Tokyo and London (ii) Hiroshima and Nagasaki
(iii) Hyderabad and Secunderabad (iv) Beijing and yuhan
- 5 Sewage water can be purified for recycling with the action of
(i) Fishes (ii) penicillin
(iii) Microorganisms (iv) Aquatic palnts
- 6 Secondary sewage treatment is mainly a
(i) Physical process (ii) Mechanical process
(iii) Chemical process (iv) Biological process
- 7 The term "terror of Bengal" is used for _____
(i) Water hyacinth (ii) Algal blooms
(iii) Plasmodim sps (iv) Aquatic palnts
- 8 Which of the following organisms represent the natural living style as biofilms?
(i) Bacteria (ii) Protozoa
(iii) Algae (iv) Fungi
- 9 Earth summit means
(i) Biofuel covention 1994 (ii) Kyoto protocol 1997
(iii) Johansberg convention 2002 (iv) Rio de Janeiro 1992
- 10 Biologists celebrate 5th June as
(i) World population day (ii) World environment day
(iii) World forest day (iv) World water day

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SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 5 = 25)

- 11 a List out the effects of Global warming.
OR
b Explain the uses of remote sensing in environmental biotechnology.
- 12 a Compare and contrast *in-situ* and *ex-situ* bio-remediation.
OR
b Explain the concept of phyto-remediation.
- 13 a Illustrate the municipal water treatment strategy.
OR
b How the industrial effluents affect soil and water pollution?
- 14 a List out the biodegradable plastics.
OR
b Explain the production of bio-ethanol.
- 15 a State the concept of environment laws.
OR
b Explain the significance of environmental policies.

SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

- 16 a Elucidate the causes and effects of the loss of biodiversity.
OR
b Discuss about the bio-geochemical cycles and its types?
- 17 a Elucidate the agricultural perspectives of pollution in industrial and rural areas.
OR
b Interpret the health hazards due to pesticide contamination.
- 18 a The heavy metals are polluting the environment - justify the statement with examples.
OR
b Categorize the primary methods of treating hospital wastes.
- 19 a Water hyacinth is used for sustainable solution for environmental development – justify.
OR
b Describe in detail about production of bio-diesel.
- 20 a Outline the holistic approaches of environmental protection and conservation.
OR
b Explain the objectives of human right policy. Add a note on Environmental Protection Act (EPA).

Z-Z-Z

END