

TELANGANA UNIVERSITY

SSR DEGREE COLLEGE

MSc BIOTECHNOLOGY II YEAR

SEMESTER – IV {ENVIRONMENT BIOTECHNOLOGY}

INTERNAL – II

QUESTION BANK

1. Which microorganism forms root nodules in leguminous plants?

- A) Azotobacter
- B) Rhizobium
- C) Bacillus
- D) Pseudomonas

Answer: B) Rhizobium

2. Which biofertilizer is commonly used in paddy fields for nitrogen fixation?

- A) Azolla-Anabaena
- B) Trichoderma
- C) Bacillus thuringiensis
- D) Pseudomonas putida

Answer: A) Azolla-Anabaena

3. Mycorrhizae mainly help plants in the absorption of:

- A) Nitrogen
- B) Potassium
- C) Phosphorus
- D) Sulfur

Answer: C) Phosphorus

4. Which of the following is a free-living nitrogen-fixing bacterium?

- A) Rhizobium
- B) Azotobacter
- C) Bacillus subtilis
- D) Escherichia coli

Answer: B) Azotobacter

5. Phosphate-solubilizing bacteria increase the availability of:

- A) Calcium
- B) Nitrogen
- C) Phosphorus
- D) Iron

Answer: C) Phosphorus

6. Bt biopesticides are produced from:

- A) Bacillus subtilis
- B) Bacillus thuringiensis
- C) Pseudomonas fluorescens
- D) Trichoderma viride

Answer: B) Bacillus thuringiensis

7. The insecticidal activity of Bt is due to:

- A) Endotoxins (Cry proteins)
- B) Exotoxins
- C) Antibiotics
- D) Enzymes

Answer: A) Endotoxins (Cry proteins)

8. Trichoderma is mainly used as:

- A) Biofertilizer
- B) Bioherbicide
- C) Fungal biopesticide
- D) Viral pesticide

Answer: C) Fungal biopesticide

9. NPV stands for:

- A) Nuclear Polyhedrosis Virus
- B) Nitrogen Producing Virus
- C) New Pathogenic Virus
- D) Natural Plant Virus

Answer: A) Nuclear Polyhedrosis Virus

10. Baculoviruses are mainly used to control:

- A) Weeds
- B) Insect pests
- C) Plant viruses
- D) Nematodes

Answer: B) Insect pests

11. The carrier material commonly used in biofertilizer production is:

- A) Sand
- B) Lignite
- C) Glass wool
- D) Plastic beads

Answer: B) Lignite

12. Genetically engineered microorganisms are also known as:

- A) Wild strains
- B) GEMs
- C) Probiotics
- D) Endophytes

Answer: B) GEMs

13. Which genetically engineered crop contains insect-resistant genes from Bt?

- A) Golden Rice
- B) Bt Cotton
- C) Hybrid Rice
- D) Wheat

Answer: B) Bt Cotton

14. Golden Rice is enriched with:

- A) Vitamin C
- B) Iron
- C) β -Carotene
- D) Calcium

Answer: C) β -Carotene

15. Which bacterium is widely used in bioremediation of oil spills?

- A) Lactobacillus
- B) Rhizobium
- C) Pseudomonas putida
- D) Streptococcus

Answer: C) Pseudomonas putida

16. Bioremediation refers to:

- A) Chemical treatment of waste
- B) Physical removal of pollutants
- C) Use of organisms to remove pollutants
- D) Sterilization of soil

Answer: C) Use of organisms to remove pollutants

17. One major environmental concern of GMOs is:

- A) Increased photosynthesis
- B) Gene transfer to non-target organisms
- C) Better crop yield
- D) Improved nutrient content

Answer: B) Gene transfer to non-target organisms

18. GEAC in India stands for:

- A) Genetic Engineering Approval Committee
- B) Genetic Engineering Appraisal Committee
- C) Gene Evaluation and Approval Council
- D) General Environmental Assessment Committee

Answer: B) Genetic Engineering Appraisal Committee

19. Which organization oversees biotechnology research in India?

- A) ICAR
- B) DBT
- C) WHO
- D) FAO

Answer: B) DBT

20. Cartagena Protocol is related to:

- A) Climate change
- B) Biosafety of GMOs

- C) Water pollution
- D) Forest conservation

Answer: B) Biosafety of GMOs

Fill in the Blanks with Answers

1.

_____ forms a symbiotic association with legume roots.

Answer: Rhizobium

2.

Blue-green algae are important _____ fixers.

Answer: Nitrogen

3.

Mycorrhizae improve the uptake of _____ by plants.

Answer: Phosphorus

4.

Azotobacter is a _____ living nitrogen-fixing bacterium.

Answer: Free

5.

Bt stands for Bacillus _____.

Answer: thuringiensis

6.

The insecticidal proteins produced by Bt are called _____ proteins.

Answer: Cry

7.

Trichoderma is used as a _____ biopesticide.

Answer: Fungal

8.

NPV stands for Nuclear _____ Virus.

Answer: Polyhedrosis

9.

Biofertilizers contain living _____.

Answer: Microorganisms

10.

The process of using organisms to remove pollutants is called _____.

Answer: Bioremediation

11.

Genetically engineered microorganisms are abbreviated as _____.

Answer: GEMs

12.

Bt Cotton is resistant to _____ pests.

Answer: Insect

13.

Golden Rice is enriched with _____ carotene.

Answer: Beta (β)

14.

Engineered bacteria can be used for cleaning up _____ spills.

Answer: Oil

15.

Transfer of genes from GMOs to other organisms is called _____ transfer.

Answer: Gene

16.

The Department of Biotechnology is abbreviated as _____.

Answer: DBT

17.

The Genetic Engineering Appraisal Committee is abbreviated as _____.

Answer: GEAC

18.

The Cartagena Protocol deals with _____ safety.

Answer: Biosafety

19.

Carrier materials such as _____ are commonly used in biofertilizer production.

Answer: Lignite

20.

Baculoviruses are highly specific to _____ pests.

Answer: Insect

III. SHORT ANSWER

1. What are biofertilizers
2. What are biopesticides
3. Write about viral pesticides
4. What is bioremediation
5. Write about genetically engineered microbes in agriculture