

MSc BIOTECHNOLOGY II YEAR

SEMESTER – IV {ENVIRONMENT BIOTECHNOLOGY}

INTERNAL – I

QUESTION BANK

Multiple Choice Questions (MCQs)

1. The major component of plant biomass is:
A) Protein
B) Lipid
C) Cellulose
D) DNA
Answer: C
2. Which of the following is an example of microbial biomass?
A) Chitin
B) Algal blooms
C) Starch
D) Pectin
Answer: B
3. Single Cell Protein (SCP) is mainly used as:
A) Fuel
B) Fertilizer
C) Protein supplement
D) Enzyme
Answer: C
4. Probiotics are:
A) Harmful microbes
B) Beneficial microorganisms
C) Enzymes
D) Antibiotics
Answer: B
5. Ethanol production is an example of:
A) Photosynthesis
B) Fermentation
C) Respiration
D) Oxidation
Answer: B
6. Methane is produced during:
A) Aerobic respiration
B) Anaerobic digestion
C) Photosynthesis
D) Transpiration
Answer: B

7. Xanthan gum is produced by:

- A) Fungi
- B) Algae
- C) Bacteria
- D) Plants

Answer: C

8. Pollution caused by heavy metals is classified as:

- A) Organic
- B) Inorganic
- C) Biotic
- D) Natural

Answer: B

9. Bioremediation involves:

- A) Chemical degradation only
- B) Physical removal
- C) Use of microorganisms
- D) Burning waste

Answer: C

10. In-situ bioremediation means:

- A) Treatment outside the site
- B) Treatment at the site
- C) Laboratory treatment
- D) Industrial treatment

Answer: B

11. Ex-situ bioremediation involves:

- A) On-site treatment
- B) Off-site treatment
- C) No treatment
- D) Natural decay

Answer: B

12. Biosorption is the process of:

- A) Metal release
- B) Metal binding by biomass
- C) Cell division
- D) Enzyme activity

Answer: B

13. Bioaccumulation refers to:

- A) Removal of toxins
- B) Storage of toxins in organisms
- C) Degradation of toxins
- D) Dilution of toxins

Answer: B

14. Phytoremediation uses:

- A) Animals

- B) Plants
- C) Fungi only
- D) Viruses

Answer: B

15. Oil spill bioremediation commonly uses:

- A) Viruses
- B) Bacteria
- C) Plants
- D) Animals

Answer: B

16. Xenobiotics are:

- A) Natural compounds
- B) Foreign chemical substances
- C) Nutrients
- D) Enzymes

Answer: B

17. Microbial leaching is used in:

- A) Food production
- B) Metal extraction
- C) Drug synthesis
- D) Photosynthesis

Answer: B

18. EIA stands for:

- A) Environmental Impact Assessment
- B) Ecological Industrial Analysis
- C) Environmental Industrial Activity
- D) Energy Impact Assessment

Answer: A

19. Hydrogen production by microbes occurs under:

- A) Aerobic conditions
- B) Anaerobic conditions
- C) Dry conditions
- D) Cold conditions

Answer: B

20. Fermentation feedstock includes:

- A) Plastic
- B) Biomass
- C) Metals
- D) Glass

Answer: B

Fill in the Blanks

1. _____ is the most abundant component of plant biomass.

Answer: Cellulose

2. Algal blooms represent _____ biomass.
Answer: Microbial
3. Single cell protein is abbreviated as _____.
Answer: SCP
4. Probiotics are _____ microorganisms.
Answer: Beneficial
5. Ethanol is produced by _____ process.
Answer: Fermentation
6. Methane is produced in _____ conditions.
Answer: Anaerobic
7. Xanthan gum is a microbial _____.
Answer: Polymer
8. Heavy metals are _____ pollutants.
Answer: Inorganic
9. Bioremediation uses _____ to degrade pollutants.
Answer: Microorganisms
10. In-situ means treatment at the _____ site.
Answer: Original
11. Ex-situ means treatment _____ the site.
Answer: Outside
12. Biosorption involves binding of _____ ions.
Answer: Metal
13. Bioaccumulation leads to _____ of toxins in organisms.
Answer: Accumulation
14. Phytoremediation uses _____ to clean pollutants.
Answer: Plants
15. Xenobiotics are _____ compounds.
Answer: Foreign
16. Oil spills are treated using _____ microbes.
Answer: Hydrocarbon-degrading
17. Microbial leaching helps in _____ extraction.
Answer: Metal
18. EIA evaluates _____ impact.
Answer: Environmental
19. Hydrogen gas can be produced by _____.
Answer: Microorganisms
20. Fermentation uses _____ as feedstock.
Answer: Biomass