TELANGANA UNIVERSITY

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

III. Answer the following question

1. What is microbial Biomass
2. What are probiotics
3. Write are Biofuels
4. What is phyto remediation
5. What are Biopesticides