

**TELANGANA UNIVERSITY**  
**S.S.R. DEGREE COLLEGE, NIZAMABAD (C.C:5029)**  
**VI SEMESTER INTERNAL ASSESSMENT II EXAMINATIONS**  
**BIOTECHNOLOGY QUESTION BANK**

---

1. Which of the following is incorrectly matched?

- (a) Alnus – Frankia
- (b) Alfalfa – Rhizobium
- (c) Nitrogen fixer – Anabaena
- (d) Mycorrhiza – Rhodospirillum

Answer: (d)

2. Which of the following nitrogen fixers is found in rice fields associated with Azolla?

- (a) Tolypothrix
- (b) Frankia
- (c) Anabaena
- (d) Spirulina

Answer: (c)

3. Which of the following is not a biofertilizer?

- (a) Mycorrhiza
- (b) Rhizobium
- (c) Agrobacterium
- (d) Nostoc

Answer: (c)

4. Which of the following is used as a biofertilizer for soybean crop?

- (a) Nostoc
- (b) Azospirillum
- (c) Rhizobium
- (d) Azotobacter

Answer: (c)

5. Which of the following is commonly used as a nitrogen fixer in paddy fields?

- (a) Frankia
- (b) Oscillatoria
- (c) Azospirillum
- (d) Rhizobium

Answer: (c)

6. This is not used in organic farming

- (a) snail
- (b) earthworm
- (c) Oscillatoria
- (d) Glomus

Answer: (a)

7. Which of the following is a nitrogen fixer in the root nodules of *Alnus*?

- (a) Clostridium
- (b) Bradyrhizobium
- (c) Azorhizobium
- (d) Frankia

Answer: (d)

8. Which of the following is a pair of biofertilizers?

- (a) Salmonella and *E.coli*
- (b) Rhizobium and grasses
- (c) Nostoc and legume
- (d) Azolla and BGA

Answer: (d)

9. Which of the following fern is a biofertilizer?

- (a) Salvinia
- (b) Azolla
- (c) Pteridium
- (d) Marsilea

Answer: (b)

10. Which of the following is an endomycorrhiza?

- (a) Rhizobium
- (b) Agaricus
- (c) Glomus
- (d) Nostoc

Answer: (c)

11. Pick the correct statement

- (a) legumes do not fix nitrogen
- (b) legumes fix nitrogen independent of bacteria
- (c) legumes fix nitrogen through bacteria in their roots
- (d) legumes fix nitrogen through bacteria in their leaves

Answer: (c)

12. Organic farming is the technique of raising crops through the usage of

- (a) resistant varieties
- (b) manures
- (c) biofertilizers
- (d) all of the above

Answer: (d)

13. A biofertilizer involving a pteridophyte host is

- (a) Azotobacter
- (b) Clostridium
- (c) Anabaena
- (d) Rhizobium

Answer: (c)

14. Which of the following plants form a symbiotic relationship with two nitrogen-fixing bacteria Rhizobium and Aero rhizobium in root and stem nodules respectively?

- (a) Sesbania rostrata
- (b) Crotalaria juncea
- (c) Sesbania aculeata
- (d) Cyamopsis tetragonoloba

Answer: (a)

15. This plant is used in sandy soils and as green manure in crop fields

- (a) Lantana camara and Saccharum munja
- (b) Phyllanthus niruri and Calotropis procera
- (c) Azolla pinnata and Dichanthium annulatum
- (d) Alhagi camelorum and Crotalaria juncea

Answer: (d)

Answer: (c)

16. Which of the following is a biocontrol agent for nematodal diseases?

- (a) Pseudomonas cepacia
- (b) Pisolithus tinctorius
- (c) Paecilomyces lilacinus
- (d) Gliocladium virens

Answer: (c)

17. This is a third generation pesticide.

- (a) Pheromones
- (b) Pathogens
- (c) Carbamates and organophosphates
- (d) Insect repellants

Answer: (a)

18. Cochineal insects are used for

- (a) Parthenium control
- (b) weeds control
- (c) Eicchornia prevention
- (d) Cactus prevention

Answer: (d)

19. The process of using a natural predator to control a pathogen is called

- (a) genetic engineering
- (b) biological control
- (c) confusion technique
- (d) artificial control

Answer: (b)

20. Rotenone is used as a

- (a) bioherbicide
- (b) insect hormone
- (c) natural insecticide
- (d) natural herbicide

Answer: (c)

21. Bioaugmentation involves

- (a) eliminating sludge
- (b) plants usage for bioremediation
- (c) addition of microbes to a cleanup site
- (d) bioventing

Answer: (c)

22. This cleanup approach includes removal of groundwater or soil from its natural setting to permit for bioremediation

- (a) Bioaugmentation
- (b) in situ bioremediation
- (c) ex situ bioremediation
- (d) Phytoremediation

Answer: (c)

23. At this stage of wastewater treatment, methanogenic microbes are the most significant

- (a) Sludge digestion
- (b) Primary treatment
- (c) Secondary treatment
- (d) Biological oxidation

Answer: (a)

24. This bioremediation technique includes mixing contaminated water and soil, fertilizers and carbon dioxide in a bioreactor to stimulate biodegradation

- (a) Composting
- (b) Slurry-phase bioremediation
- (c) In situ hybridization
- (d) Biopile treatment

Answer: (b)

25. Bioremediation

- (a) usage of microbes to create new organisms
- (b) usage of anaerobic bacteria to create new antibiotics
- (c) usage of microbes to destroy environmental pollutants
- (d) usage of aerobic bacteria to create new vaccines

Answer: (c)

26. Ananda Chakraborty received the first U.S. patent for a GM entity. The entity was

- (a) The GloFish
- (b) a transgenic mouse expressing the growth hormone gene
- (c) Cloned E.Coli
- (d) Pseudomonas engineered to degrade petroleum

Answer: (d)

27. A process using microbes to convert toxic industrial wastes to less toxic or non-toxic compounds is

- (a) Precipitation
- (b) Complement fixation
- (c) Bioconversion
- (d) Bioremediation

Answer: (d)

28. \_\_\_\_\_ bacterium can withstand the dosage of radiation, which are several times higher than what human cells can tolerate

- (a) Escherichia coli
- (b) Conus magus
- (c) Deinococcus radiodurans
- (d) Staphylococcus aureus

Answer: (c)

29. The bioremediation process involving the usage of plants to degrade pollutants is

- (a) Composting
- (b) Biopile
- (c) Phytoremediation
- (d) Land farming

Answer: (c)

30. This is not an indigenous microbe used for bioremediation

- (a) *Pseudomonas aeruginosa*
- (b) *Piscirickettsia salmonis*
- (c) *Phanerochaete sordida*
- (d) *E. coli*

Answer: (b)

31. Which of the following does not represent strategy for phytoremediation?

- a) Phytodegradation
- b) Phytomining
- c) Continuous removal through hyper accumulators
- d) Chelate mediated extraction of pollutants

32. The process of phytoremediation where complexation and immobilization of toxin takes place within the soil is called

- a) phytoextraction.
- b) phytodegradation
- c) phytovolatilization
- d) phytostabilization



33. Release of nutrients, oxidants or electron donors into the environment to stimulate naturally occurring microorganisms to degrade a contaminant, is referred to as

- a) biostimulation
- b) phytoremediation
- c) bioaugmentation
- d) bioremediation

34. Which among the following is a hydrocarbon degrading bacteria?

- a) Alcanivorax
- b) Oleispira
- c) Marinobacter
- d) All the above

35. Which among the following is a genetically engineered super bug utilized in petroleum biodegradation?

- a) Pseudomonas putida
- b) Bacillus cereus
- c) Acetobacter
- d) None of the above

Short Answers.

1. What is bio-remediation?
2. What is Eutrophication?
3. What is bio-degradation?
4. What is exvivo conservation?
5. What are bio fuels?