

**PGIVS-012-B-21**  
**M.Sc. IV Semester (CBCS) Degree Examination**  
**BIOTECHNOLOGY**  
**Environmental Biotechnology**  
**Paper : SCT - 4.1**

**Time : 3 Hours**

**Maximum Marks : 80**

*Instructions to Candidates:*

- 1) **Section - A** has **all** compulsory questions.
- 2) Answer **B** and **C** sections as per the instructions.

**SECTION - A**

Answer the following in brief:

**(10×2=20)**

1. Consumers
2. Autotrops
3. Fungicides
4. Ozone Layer
5. Bioagumentation
6. Solid waste disposal
7. Biohydrogen
8. Organic Nanoparticles.
9. Aerobic digestion.
10. Azotobacter

**SECTION - B**

Answer any **Four** of the following:-

**(4×6=24)**

11. Animal ecosystem
12. Organic pollutants
13. Bioethanol
14. Gene mutation
15. Soil pollution
16. Biocomposting

## SECTION - C

Answer any **Three** of the following.

(3×12=36)

17. Discuss in detail about various methods for Anaerobic sludge blanket reactors.
  18. Write an account on Radioactive oil pollution.
  19. Give Detailed account on Renewable resources.
  20. "Biomass is the source of Energy" Substantiate the statement.
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[Total No. of Pages : 2

**PGIVS-010-B-21**  
**M.Sc. IV Semester (CBCS) Degree Examination**  
**BIOTECHNOLOGY**  
**Plant and Agricultural Biotechnology**  
**Paper : HCT - 4.1**

**Time : 3 Hours**

**Maximum Marks : 80**

*Instructions to Candidates:*

- 1) **Section - A** has **all** compulsory questions.
- 2) Answer **B** and **C** sections as per the instructions.

**SECTION - A**

Write brief notes on **TEN** of the following:

**(10×2=20)**

1. Totipotency
2. Virulence gene
3. Ti plasmid
4. Co-integrate vector
5. QTL mapping
6. Bt cotton
7. Seed storage protein
8. Plantibody
9. *Pongamia pinnata*
10. ASTM

**SECTION - B**

Write short notes on any **FOUR** of the following:

**(4×6=24)**

11. Micropropagation
12. Somatic hybridization
13. Agrobacterium mediated transformation
14. Gene targeting

15. MAS for insect resistance
16. Round up tomato

**SECTION - C**

Answer any **Three** of the following:

**(3×12=36)**

17. Write a detailed account of germplasm conservation and its significance.
  18. Describe the different molecular markers used in plant biotechnology.
  19. Discuss source-sink relationship for increasing the yield.
  20. Describe the various technologies used for biodiesel production.
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**PGIVS-011-B-21**  
**M.Sc. IV Semester (CBCS) Degree Examination**  
**BIOTECHNOLOGY**  
**Medical Biotechnology and Nanobiotechnology**  
**Paper : HCT - 4.2**

**Time : 3 Hours****Maximum Marks : 80****Instructions to Candidates:**

- 1) **Section "A"** Has **all** Compulsory Questions.
- 2) Answers **"B"** and **"C"** Sections as per Instructions.

**SECTION - A**

Answer the following in brief:

**(10×2=20)**

1. Gonococci
2. Pandemic
3. Monteau Test
4. HIV
5. Cytopathic effect
6. Drug Resistance
7. Sol Process
8. Nanoparticles
9. Amoebiasis
10. Capsomeres

**SECTION - B**Answer any **FOUR** of the Following:**(4×6=24)**

11. Normal microbial flora of human body.
12. Role of vectors in disese transmission.
13. Replication of Viruses
14. Streptococcus
15. Biology of Vectors
16. Structure of Bacteriophage

### SECTION - C

Answer any **THREE** of the following:

**(3×12=36)**

17. Discuss in detail the Morphology, disease cycle and Lab diagnosis of Salmonella typhi.
  18. Write in detail the sources infection and control measures of Amoebiasis.
  19. Give an account of synthesis of Nanoparticles by physical methods.
  20. Describe structure and mode of action of Penicillin.
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