

**ISLAMIAH COLLEGE ( AUTONOMOUS ) VANIYAMBADI**

**III B.Sc., BIO-TECHNOLOGY**

**CIA TEST – II MAR 2020**

**ENVIRONMENTAL BIOTECHNOLOGY**

**SUBJECT CODE : U5BT6001**

**TIME : 3 HOURS**

**MARKS : 75**

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**SECTION-A**

**10 x 2 = 20**

**ALL QUESTIONS CARRY EQUAL MARKS**

1. Explain Pollutants?
2. Show the effects of Natural Disaster?
3. What is Lithosphere?
4. List out the uses of Anaerobic filters?
5. Explain Anthrosphere?
6. Select the uses of Activated Sledge?
7. Write any three Xenobiotic Compounds?
8. Write a short note on Poly aromatic compounds?
9. What is Non-renewable resource?
10. Give short notes on Soil Pollution?

**SECTION-B**

**5 x 5 = 25**

**ANSWER ALL THE QUESTIONS**

11. a) Distingusih between Global Warming and Ozone Depletion?

(or)

b) Analysis of Hydrosphere with examples.

12. a) What can you understand about Green House Effect?

(or)

b) Define aerobic waste water treatment process?

13. a) Write a short note on Environmental Policy?

(or)

b) What is Oxidation Ponds and its uses?

14. a) Describe Xenobiotic Compounds?

(or)

b) What are the Simple aromatic compounds and its uses?

15. a) write a method on EIA

(or)

b) Describe the Control of Waste Water and Soil by Biotreatment?

**SECTION-C**

**10 x 3 = 30**

**ANSWER ANY THREE QUESTION**

16. What can you understand about Global Environmental Problems?

17. Illustrate essay on Air, Noise, Water Pollution and its control?

18. Explain an uses of Bioremediation with molecular techniques in environment ?

19. Explain the treatment of industry waste of dairy distillery, tannery industries?

20. Explain the biotechnology methods of air pollution and soil bio-treatment

PAMA

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**ISLAMIAH COLLEGE (AUTONOMOUS), VANIYAMBADI**  
**CIA Test II – March 2020**

**Time: 3Hrs**

**Maximum: 75**

**III BSc (Biotechnology)**

**VI Semester**

**Sub.Code U5BTE601**

**Marine Biotechnology**

**PART –A (2 x 10 = 20 Marks)**

**Answer ALL Questions**

1. What is Oceanography?
2. Name any four organisms living in rocky shore.
3. What do you mean by Marine Biodiversity?
4. Write any two biodiversity hot spots in India.
5. What is marine Biofilm?
6. Name any four marine antibiotics.
7. What are the types of marine pollution?
8. Name any two enzyme isolated from the marine organisms?
9. Define :Ballast water.
10. How do you define marine biofouling?

**PART –B (5 x 5 = 25 Marks)**

**Answer ALL Questions**

11. a) Give a short note on physical components of sea water.**OR**  
b) List out intertidal organisms.
12. a) India is one among the megabiodiverse countries – Justify.**OR**  
b) Discuss about the mangrove ecosystem.
13. a) Explain marine based antimicrobials.**OR**  
b) How is a biofilm formed in marine surface?
14. a) Give an account on oil pollution in sea. **OR**  
b) Explain the impact of ballast water.
15. a) write about marine toxins with few examples. **OR**  
b) What is bio-deterioration ? Discuss its impact on marine structures.

**PART –C (3 x 10 = 30 Marks)**

**Answer any THREE questions**

16. Discuss in about the different marine habitats and its significance.
17. Give an account on biodiversity in coral ecosystem.
18. Write in detail about the drugs from the sea.
19. Describe the role of biotechnology in solving marine pollution.
20. Explain the application of biotechnology in controlling the biofouling.

**ISLAMIAH COLLEGE (AUTONOMOUS)**  
**VANIYAMBADI**  
**CIA TEST II –MARCH 2020**

TIME : 3 Hrs

MAX. MARKS: 75

**Class:** III B.Sc. Biotechnology **Semester:** IV **Sub. Code:** U5BT6003

**Subject Name:** Medical Biotechnology

**PART - A (10 X 2 = 20 MARKS)**

**Answer ALL Questions**

1. Define the physiology of respiratory gas exchange in the lungs.
2. What do you understand Nephrons?
3. Write the mode of infections of bacterial diseases.
4. How Alzheimer's disease develops?
5. Name the vectors used in gene therapy
6. Write your understanding about invivo gene therapy
7. Define antibodies
8. Can you define cell line.
9. What are the causes for cancer.
10. Write a note on PCR.

**PART - B (5 X 5 = 25 MARKS)**

**Answer ALL Questions**

11. (a) Write the steps involved in carbohydrate digestion.  
(Or)  
(b) Write a brief account on anemia and leukemia
12. (a) Describe any two genetic diseases you know and the cause for the genetic disorder.  
(Or)

(b) Do you know the diagnostic procedure for the bacterial disease and explain.

13. (a) Describe the retrovirus based gene therapy procedure.

(Or)

(b) Explain your understanding about ex-vivo based gene therapy with example

14. (a) What is the significance of hybridoma technology in monoclonal antibody production.

(Or)

(b) Explain the technique of animal cell culture.

15. (a) write the procedure of antibody engineering techniques.

(Or)

(b) write the application of PCR in medical diagnosis.

**PART - C (3X 10 = 30 MARKS)**

**Answer any THREE Questions**

16. Describe the mechanism of filtration in Nephron and urine formation.
17. Prove nucleic acid probe and antibodies are clinical diagnostic tool
18. Explain the types of gene delivery.
19. Describe the hybridoma technology for monoclonal antibody production.
20. What do you know about blood component based therapy

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CIA TEST II –MARCH 2020**

TIME : 3 Hrs

MAX. MARKS: 75

**Class: III B.Sc Biotechnology      Semester: VI   Sub. Code: U5BT6002**

**Subject Name: NANO BIOTECHNOLOGY**

**PART - A (10 X 2 = 20 MARKS)**

**Answer ALL Questions**

1. Define Nanoparticle
2. Describe bacterial synthesis of Nanoparticles
3. Can you recall Fabrication
4. Describe Lipoplexes
5. Define AFM
6. Define XRD
7. What can you say about Cryofixation?
8. What is Dehydration
9. What is meant by Gene Therapy?
10. Describe wound healing Nanoparticle

**PART - B (5 X 5 = 25 MARKS)**

**Answer ALL Questions**

11. (a) Write notes on Scope of Nanotechnology
- (Or)
- (b) Describe the properties of Nanoparticles.

12. (a) Describe Nucleic acid engineered nanomaterials.

(Or)

- (b) Explain Protein patterning and their applications.

13. (a) Explain the working principles of SEM.

(Or)

- (b) Describe the applications of TEM in Nanotechnology.

14. (a) Describe in detailed account on Embedding and Staining.

(Or)

- (b) What is your opinion about Cytopathology?

15. (a) Describe Antimicrobial property of Nanomaterials.

(Or)

- (b) Describe the role of nanoparticles in pollution control.

**PART - C (3 X 10 = 30 MARKS)**

**Answer any THREE Questions**

16. Write detailed account on Biosynthesis of Nanomaterials.
17. Write detailed account on Medical applications of Nanoparticles.
18. Explain the importance of Microscope in Nanotechnology.
19. Write notes on methods of sample preparation for tissue material.
20. Write detailed account on Nano sensors.

**(MAF)**

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**CIA TEST II –MARCH 2020**

**TIME : 3 Hrs      Semester: VI      MAX. MARKS: 75**

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**Class: III B.Sc. Biotechnology      Sub. Code: U5BT6004**

**Subject Name: HERBAL BIOTECHNOLOGY**

**PART - A (10 X 2 = 20 MARKS)**

**Answer ALL Questions**

1. What is mean by Ancient medicine?
2. Define Unani Medicine.
3. What is the statement of Crude drugs?
4. Any two name of the plant using Cold ?
5. Two major role of plant tissue culture- Write?
6. What is mean by Secondary metabolites compounds?
7. Define phytochemicals?
8. Write the botanical name of Aswagantha and Aloe?
9. Write any two plants produced Volatile oil compounds?
10. In which plants produce more carbohydrates? Example.

**PART - B (5 X 5 = 25 MARKS)**

**Answer ALL Questions**

11. a) Explain about Islamic medicine? **(or)**  
b) Explain about Modern Medicine.
12. a) Short note on importance of herbal plants cultivation methods. **(or)**  
b) Write short notes on processing of herbal plants?

13. a) Elucidate that Catheranthus roseus plants description, classification, medicinal value? **(or)**  
b) Elucidate that Andrographis paniculata plant classification, description and Value of medicine?
14. a) Write notes on physical and chemical properties of drug evaluation? **(or)**  
b) Write notes on morphological and microscopical methods of drug evaluation?
15. a) Explain about secondary metabolites of Tannin. **(or)**  
b) Explain about secondary metabolites of Volatile oilds.

**PART –C      (3 x 10 = 30 Marks)**

**Answer any THREE questions**

16. Discuss about Siddha and Ayurveda medicine and its importance.
17. Describe in detail about crude drugs.
18. Explain about Plant Tissue Culture techniques.
19. Write in detail about Biological evaluation and Microbiological methods of drugs.
20. Describe in detail about plant based derived products.

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