

Reg.No.:



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]  
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

**Question Paper Code: 90001**

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2024

Eighth Semester

Biotechnology

U19BTE20 – BIOETHICS & IPR

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

| Knowledge Levels<br>(KL) | K1 – Remembering   | K3 – Applying  | K5 - Evaluating |
|--------------------------|--------------------|----------------|-----------------|
|                          | K2 – Understanding | K4 – Analyzing | K6 - Creating   |

**PART – A**

(10 x 2 = 20 Marks)

| Q.No. | Questions   | Marks | KL | CO  |
|-------|---|-------|----|-----|
| 1.    | What is bioethics?  | 2     | K2 | CO1 |
| 2.    | List the risks involved in releasing the genetically engineered organisms into environment. | 2     | K1 | CO1 |
| 3.    | Expand GATT. State its function.  | 2     | K2 | CO2 |
| 4.    | How WTO and GATT are interrelated?  | 2     | K1 | CO2 |
| 5.    | Clarify the genetic issues involved in patenting human genes.                               | 2     | K2 | CO3 |
| 6.    | List out the patent databases.  | 2     | K1 | CO3 |
| 7.    | Write short notes on IPR.   | 2     | K1 | CO4 |
| 8.    | What is trade secret?   | 2     | K1 | CO4 |
| 9.    | Define bio safety.  | 2     | K1 | CO5 |
| 10.   | Write short notes on biological weapon.   | 2     | K1 | CO5 |

**PART – B**

(5 x 13 = 65 Marks)

| Q.No.  | Questions   | Marks | KL | CO  |
|--------|---|-------|----|-----|
| 11. a) | Brief the ethical issues involved in genetic testing and screening. | 13    | K2 | CO1 |

|     |  |    |    |     |
|-----|--|----|----|-----|
|     | (OR)   |    |    |     |
|     | b) Summarize the Socio-Economic impact of biotechnology.   | 13 | K2 | CO1 |
| 12. | a) Write brief notes on Indian patent act 1970 and recent amendments.  | 13 | K3 | CO2 |
|     | (OR)   |    |    |     |
|     | b) Narrate the role of GATT in international trade.  | 13 | K2 | CO2 |
| 13. | a) With a neat flow chart, enumerate the various stages from filling till grant of a patent in India.  | 13 | K3 | CO3 |
|     | (OR)   |    |    |     |
|     | b) Write a brief note on National and PCT filling procedure.   | 13 | K3 | CO3 |
| 14. | a) Trademark law not only protects the trademark of companies but also protects the interest of consumers. Comment and explain the purpose of trademark law. | 13 | K4 | CO4 |
|     | (OR)   |    |    |     |
|     | b) Discuss in detail about IP as a factor in R & D.  | 13 | K3 | CO4 |
| 15. | a) Explain in detail about various levels of biosafety.  | 13 | K3 | CO5 |
|     | (OR)   |    |    |     |
|     | b) Paraphrase the prudent practices for handling and disposal of GMOs.   | 13 | K2 | CO5 |

### PART – C

(1 x 15 = 15Marks)

| Q.No. | Questions  | Marks | KL | CO  |
|-------|--|-------|----|-----|
| 16.   | a) Analyse the various aspects of Cartagena protocol on biosafety.                                       | 15    | K4 | CO5 |
|       | (OR)   |       |    |     |
|       | b) As a biotechnologist, suggest the special procedures to be followed in rDNA-based product production. | 15    | K5 | CO5 |