

## GUJARAT TECHNOLOGICAL UNIVERSITY

M.SC. INDUSTRIAL BIOTECHNOLOGY(IB) - SEMESTER - 2 EXAMINATION - SUMMER - 2024

**Subject Code:1320106**

**Date: 20 May 2024**

**Subject Name:Intellectual Property Rights, Biosafety and Bioethics**

**Time:10:30 AM TO 01:00 PM**

**Total Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Draw neat and clean diagrams as required

**Q.1 Write a note on the following**

**(Marks-  
10X2=20)**

1. Define Intellectual Property (IP) and list various categories of IP.
2. Explain the concept of a patent and outline the criteria for patentability.
3. Compare and contrast the key differences between The Indian Patent Act of 1970 and its 2005 amendment.
4. Analyse sections 3 of The Indian Patent Act of 2005 and their significance.
5. Define genome editing and enumerate the tools utilized for this genetic manipulation technique.
6. Discuss the advantages of filing a provisional patent application in comparison to a complete application.
7. Provide examples of both paid and free patent databases available for patent research.
8. Provide the full forms of GEAC, RCGM, GATT, and WIPO.
9. Explore the concept of biosafety levels and explain how they are categorized and defined.
10. Evaluate the advantages offered by the Patent Cooperation Treaty (PCT) over traditional patent application processes.

**Q.2 Answer the following (Any 2 out of 3)**

**(Marks-  
2X10=20)**

1. Outline the patent filing process and delve into the application steps, including an explanation of various forms involved.
2. Provide an overview of the Patent Cooperation Treaty (PCT), highlighting its purpose and significance in international patent protection.
3. Case Study: IPR Protection Strategy: A tech start-up has devised a ground-breaking software algorithm aimed at bolstering cyber security. In your role as their legal advisor, devise an intellectual property rights (IPR) strategy to safeguard this invention, considering

avenues such as patents, copyrights, and trade secrets.

**Q.3 Answer the following (Any 6 out of 8)**

**(Marks-  
6X5=30)**

1. Identify different levels of microbiological biosafety and compare their respective applicability.
2. Compare and contrast the risk assessment processes for Transgenic Crops and Congenic Plants.
3. Explore the various types of patents and their characteristics.
4. Provide an overview of the Cartagena Protocol on Biosafety and its significance in regulating the international trade of genetically modified organisms.
5. Explain the functions of WIPO (World Intellectual Property Organization) and its role in global intellectual property protection.
6. Differentiate between Biosafety and Biosecurity, highlighting their respective focuses and objectives.
7. Discuss the various forms required for filing a complete patent application, detailing their purposes and contents.
8. Define GM food labelling and analyse its purpose and regulations according to FSSAI (Food Safety and Standards Authority of India).

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