- (ii) Questions :9 Sub. Code: 2 5 9 5 3 Exam. Code: 0 4 3 8

M.Sc. Bio-Technology 4th Semester (2055)

## INTELLECTUAL PROPERTY RIGHTS, BIOSAFETY AND BIOETHICS

Paper: MBIO-403

Time Allowed: Three Hours] [Maximum Marks: 80

**Note**:— Attempt *five* questions in all. Question No. 1 is compulsory. Select *one* question from each unit.

- 1. (a) What are Plant Breeder's Rights?
  - (b) What is a compulsory license and its conditions?
  - (c) What are mail box applications?
  - (d) What are standard essential patents?
  - (e) What is an IDA and its role?
  - (f) How computer software is protected?
  - (g) What are social implications of biotechnology patenting?
  - (h) What is patentable subject matter under TRIPS? 2×8

## UNIT-I

2. (a) What are copyrights and its protection? Discuss role of Creative Commons in academics.

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(b) Write notes on: Trademarks and its features (i) PCT. 8,8 (ii) 3. What are Industrial designs and its criteria for registration? (a) Discuss Hague Agreement for international registration of designs. Write notes on: (b) WIPO and its role (i) (ii) Fair use doctrine in copyrights. 8,8 UNIT-II 4. What is patent infringement and its types? What are remedies available in India in case of an infringement? (b) What are patent disclosure requirements and patent filing procedures in India? 8,8 5. (a) Write a note on non-patentable inventions in India. What is principle of exhaustion of patents? (b) Discuss novelty and inventive step requirements for patent in India. 6,6,4

## UNIT-III

- 6. (a) How plant varieties are protected in India and USA?
  - Discuss patenting of life forms. Give examples of International (b) and national biotech patents. 8,8

- 7. (a) Write notes on:
  - (i) Budapest Treaty
  - (ii) UPOV.
  - (b) Elaborate on biotech patenting trends in developed and developing countries.
    8,8

## UNIT-IV

- 8. (a) Discuss the role of collaborative research and technology transfer in innovation.
  - (b) What is MTA and its significance in technology transfer?
  - (c) Discuss ethical issues in biotech patenting. 6,6,4
- 9. (a) How global health crisis can be addressed through voluntary licensing and differential pricing of IPs?
  - (b) Discuss potential alternatives to intellectual properties in rewarding the innovators?