

2072

M.Sc. (Biotechnology) Fourth Semester
MBIO-403: Intellectual Property Rights, Bio-safety and Bioethics

Time allowed: 3 Hours

Max. Marks: 80

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Attempt the following:-

- a) What is compulsory license and its significance?
- b) What is difference between patent and tradeseecret?
- c) What is fair use of copyrights?
- d) What patentable subject matter according to Article 27 of TRIPS Agreement?
- e) What are major social implications of biotechnology?
- f) What is the importance of GMPs in bio-pharmaceutical industry?
- g) What is the role of GEAC in research and commercialization?
- h) What are the provisions of plant variety protection in UPOV? (8x2)

UNIT - I

- II. a) Give main principles of TRIPs Agreement. How TRIPs is responsible in maintaining minimum standards in various IPRs?
- b) Discuss non patentable inventions in India.
- c) What are patent claims? What important points are to be considered in drafting of claims? (6,6,4)

- III. a) What is trademark piracy and its relief available?
- b) How a patent application can be filed in India?
- c) Discuss role of international and national databases in patent literature search. (6,6,4)

UNIT - II

- IV. a) Discuss procedure of patent filing through PCT.
- b) What is patent infringement? Discuss briefly litigation procedure. (2x8)
- V. a) What is Budapest treaty and IDA? Enlist examples of patented biotechnology based inventions.
- b) How collaborative research promotes innovation and product development? Which institutions are playing significant role in technology transfer in India? (2x8)

(2)

UNIT - III

- VI. a) What influences public perceptions related to biotechnology research and its products? Discuss experiences from developing nations related to biotechnological products.
- b) What are biological weapons? What are ethical issues related to it? (2x8)
- VII. a) How government is encouraging development of Indian biotechnology industry? Discuss SWOT analysis.
- b) What factors affect biotech patenting in developed and developing countries? Explain with suitable examples. (2x8)

UNIT - IV

- VIII. a) What are Good laboratory practice? Discuss their role in validation of research data.
- b) Discuss regulatory role of MOEF in India.
- c) What is the role of institutional biosafety committee? (6,6,4)
- IX. a) What is biosafety management system and its components?
- b) How transboundary movement of living modified organisms is ensured through Cartagena protocol?
- c) How EPA and USDA monitor and regulate biotechnology in USA? (6,6,4)

x-x-x