Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/M.Tech(BT)/SEM-3/MBT-316A/2012-13

2012

ETHICS, IPR & BIOSAFETY

Time Allotted : 3 Hours *Full Marks* : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A
(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10

   i) Ethical principles are based on

      a) human consciousness

      b) human conscience

      c) international policies

      d) governmental conscience.

   ii) Cartagena protocol is aimed to

      a) safe use, transfer and handling of GMO

      b) minimize the cost production of GHG

      c) minimize the harm posed towards the non-annex I countries

      d) help non-annex I countries to perform international emission trading.

iii) By Indian Copyright Act 1957, a book can be protected for
   a) 60 years from the date of publication
   b) 60 years from the next calendar year in which the author dies
   c) 25 years from the next calendar year in which the author dies
   d) none of these.

iv) UPOV is intended for
   a) the protection of performers, producers of phonograms and broadcasting organizations
   b) the protection of literary and artistic works
   c) the protection of new plant varieties
   d) none of these.

v) A trade secret may be a
   a) logo
   b) phrase
   c) non-publishable document
   d) none of these.

vi) WHO stands for
   a) World Heavy Opportunity
   b) World Health Organization
   c) World Weightlifter's Organization
   d) World Hope Organization.

vii) Bt-brinjal is
   a) protected from pests
   b) a genetically modified crop
   c) not available in markets of India
   d) all of these.

viii) Which one of the following is not one of the members of non-annex I countries ?
   a) China b) Namibia
   c) Switzerland d) India.

ix) Vienna Convention is
   a) for the protection of literary and artistic works
   b) for the protection of developing countries from the hazards produced in Annex I countries
   c) for the prevention of organized piracy
   d) a collection of various specific conventions.

x) TRIPS states that
   a) copyright must be claimed by written application
   b) patent protection should be given for 30 years
   c) copyright is automatic
   d) patents must be published.

xi) Human experimentation must follow
   a) the Nuremberg code
   b) the Montreal protocol
   c) the Budapest treaty
   d) none of these.

xii) Research involving well-studied, non-pathogenic micro-organisms is done in laboratories with
   a) Biosafety Level - 1 b) Biosafety Level - 2
   c) Biosafety Level - 3 d) Biosafety Level - 4.

GROUP – B
(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Discuss the social responsibilities of a biotechnologist.
3. Write short notes on any *two* of the following : $2 \times 2\frac{1}{2} = 5$
   a) Indian Patent Act, 1970
   b) Schools of thoughts in jurisprudence
   c) Prior art and State of art.
4. Discuss the responsibilities of the Independent Ethics Committee.
5. Discuss the ethical issues in safe use and handling of genetically modified organisms.
6. State the objective and activities of WIPO.

GROUP – C
(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. Discuss the role of control(s) in an experiment. Describe the importance of using preclinical trials before performing the clinical trials. What was the outcome of Montreal protocol ? Discuss the ethical issues involved in patenting human genes. 5 + 3 + 3 + 4

8. Discuss the background of formation of the Belmont report. Mention the information that should be provided in the information sheet for getting the voluntary informed consent before the starting of a research involving human subjects. Discuss the role of international organizations and treaties for the protection of human subjects involved in an experiment. 3 + 8 + 4

9. Describe jurisprudence. What are the criteria to get a trademark ? Suppose you have formulated a health drink suitable for the children of the age group 5 years - 12 years. What will be your control groups during clinical trial ? Discuss the kind of placebo you would like to use in your study. When will you be able to file a patent for your product ? Design a trade mark for your product. 3 + 2 + 4 + 3 + 1 + 2

10. Describe the contents of patent specification and procedure for obtaining patents for a particular product or service. How is the Budapest treaty related to biodiversity ? Give two examples of geographical indications. 8 + 4 + 3

11. Write short notes on any *five* of the following : 5 × 3
    a) BSL-4
    b) Guidelines of DBT
    c) Good Clinical Practice
    d) Rights of a consumer
    e) UPOV
    f) Post-TRIPS effects.