

**BIOETHICS & IPR  
(HMTS 4203)**

Time Allotted : 3 hrs

Full Marks : 70

*Figures out of the right margin indicate full marks.*

*Candidates are required to answer Group A and  
any 5 (five) from Group B to E, taking at least one from each group.*

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

**Group - A  
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) Which of the following persons can't make an application for a patent as per the Patents Act, 1970?  
 (a) Any person claiming to be the true and first inventor of the invention  
 (b) Any person interested in the invention  
 (c) Any assignee of the true and first inventor  
 (d) Legal representative of the first inventor.
- (ii) Preclinical trial do not involve  
 (a) *in vitro* model  
 (b) *in vivo* animal model  
 (c) both *in vivo* animal model and *in vitro* model  
 (d) human model.
- (iii) Xenotransplantation is a  
 (a) biosafety issue  
 (b) bioethical issue  
 (c) social issue  
 (d) all of the above.
- (iv) According to the Belmont Report, research involving human subjects demands  
 (a) informed consent  
 (b) risk assessment  
 (c) benefit assessment  
 (d) subject selection.
- (v) A patent can be granted if the invention is  
 (a) novel  
 (b) non-obvious  
 (c) capable of industrial applicability  
 (d) all of the above.

- (vi) Statement 1: A mere use of a known process cannot be patented, unless such known process results in a new product or employs at least one new reactant.  
 Statement 2: A new form of a known substance cannot be patented, even if it results in the enhancement of therapeutic known efficacy of the substance.  
 (a) Statement 1 is true, 2 is false.  
 (b) Statement 1 is false, 2 is true.  
 (c) Statement 1 and 2 both are false.  
 (d) Statement 1 and 2 both are true
- (vii) In India, a computer programme's codes can be protected by way of  
 (a) patents  
 (b) copyrights  
 (c) trade Marks  
 (d) trade Secrets.
- (viii) What is the term of a Patent in India?  
 (a) 05 years  
 (b) 10 years  
 (c) 15 years  
 (d) 20 years.
- (ix) Which of the following does Patents aim to protect in India?  
 (a) Software  
 (b) Literary works  
 (c) Technological inventions  
 (d) None of the above.
- (x) Sheldon Cooper invents an umbrella that could be folded 6 times and easily put into a trouser pocket or a hand purse. Which of the following IP rights is the most appropriate in protecting his novel invention?  
 (a) Copyrights  
 (b) Trade Marks  
 (c) Patent  
 (d) Trade Secrets.

**Group - B**

2. (a) What is bioethics? Describe the principle of bioethics.  
 (b) Discuss about Ethical, Legal and Social Issues (ELSI) in Biotechnology on the following: (i) Stem Cell Research, (ii) Genetic Testing.  
**(1 + 3) + 4 + 4 = 12**
3. Discuss about Ethical, Legal and Social Issues (ELSI) in Biotechnology on the following:  
 (i) Gene therapy  
 (ii) Eugenic genetic engineering  
 (iii) Genetically modified foods.

**4 + 4 + 4 = 12**

**Group – C**

4. Describe the IPR and biosafety issues for the following cases:
- Daimond Vs. Chakraborty case (1980)
  - Neem patent case (1997)
  - Bt Brinjal in India (2012).

**4 + 4 + 4 = 12**

5. (a) What is biopiracy? Explain with example.  
 (b) How do you define plagiarism? Explain with example.  
 (c) Mention the points of Cartagena protocol for the protection of nature.

**4 + 4 + 4 = 12****Group – D**

6. (a) Explain infringement of patent.  
 (b) Explain the remedies against infringement.  
 (c) Discuss about product patent and devices with example.

**4 + 4 + 4 = 12**

7. (a) Define GATT and WTO.  
 (b) Why people say GATT is the backbone of WTO. Comment about the success of GATT.  
 (c) Explain trade without discrimination.

**4 + 4 + 4 = 12****Group – E**

8. (a) Write a name of one biotechnological product for which you want to develop your own biotech company. Draw the design of the logo or trade mark of your biotechnological product.  
 (b) Describe the criteria to get the patent for the biotechnological product you made. Write steps to get the patent of your product.  
 (c) What will be the trade secret for the said biotechnological product?

**(1 + 4) + 4 + 3 = 12**

9. (a) Design a trade mark for a sunscreen cream whose target group is only men.  
 (b) What will you do if any other company mimics your product?  
 (c) Discuss the appropriateness of the support mechanism available for entrepreneurship in India.

**4 + 4 + 4 = 12**