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GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, May – 2021

(Eighth Semester)

BBTPE8011- IPR, Bioethics and Bio safety

(Biotechnology)

Time: 2 hrs

Maximum: 50 Marks

The figures in the right hand margin indicate marks.**PART – A: (Multiple Choice Questions)****(1 x 10 = 10 Marks)****Q.1. Answer ALL questions****[CO#] [PO#]**

- | | | |
|--|---|---|
| a. Intellectual Property Rights (IPR) protect the use of information and ideas that are of | 1 | 1 |
| (i) Ethical value | | |
| (ii) Moral value | | |
| (iii) Social value | | |
| (iv) Commercial value | | |
| b. In 'quid-pro-quo', quo stands for | 1 | 1 |
| (i) knowledge disclosed to the public | | |
| (ii) monopoly granted for the term of the patent | | |
| (iii) exclusive privilege of making, selling and using the invention | | |
| (iv) None of the above | | |
| c. Patent application can be filed in India by | 2 | 1 |
| (i) True and First Inventor | | |
| (ii) Assignee of the inventor | | |
| (iii) Legal representative of the inventor | | |
| (iv) All the above | | |
| d. Patent application contains | 2 | 1 |
| (i) Form-1 | | |
| (ii) Form-2 | | |
| (iii) Both (a) and (b) | | |
| (iv) None | | |
| e. When working with infectious biological material, the best place to perform the work would be: | 3 | 1 |
| (i) In a Biological Safety Cabinet | | |
| (ii) On the laboratory bench | | |
| (iii) On a clean bench, wearing a dust mask | | |
| (iv) In a Fume Hood | | |
| f. Biosafety is working safely with biological material or organisms with potential to cause disease in | 3 | 1 |
| (i) Animals | | |
| (ii) Plants | | |
| (iii) Humans | | |
| (iv) All the above | | |
| g. For research that requires Biosafety Level 2 containment, Biological Safety Cabinets must be certified by the Investigator: | 3 | 1 |
| (i) Daily | | |
| (ii) Monthly | | |
| (iii) Annually | | |
| (iv) Never, it's someone else's problem | | |
| h. Regarding the concept of bioethics which of the following statement is false? | 4 | 1 |
| (i) It has to do only with cloning and euthanasia | | |
| (ii) Bioethics is the same as Medical ethics | | |
| (iii) It has to do with moral dimension of Medical care | | |
| (iv) It has to do with all aspect of Medical care | | |

- | | | |
|---|---|---|
| i. Which is the least important to bioethics?
(i) Personal preference of healthcare Provider exclusive of Patient's
(ii) National laws
(iii) Health Professional bodies regulations
(iv) Ethical theories | 4 | 1 |
| j. The core principle of bioethics are the following except
(i) Maleficence
(ii) Autonomy
(iii) Justice
(iv) Beneficence | 4 | 1 |

PART – B: (Short Answer Questions)

(2 x 5 = 10 Marks)

- | <u>Q.2. Answer ALL questions</u> | [CO#] | [PO#] |
|--|-------|-------|
| a. What remedies are available to redress Intellectual property (IP) infringement? | 1 | 1 |
| b. How does the international community coordinate Intellectual property (IP) protection | 1 | 1 |
| c. Why could a patent be invalidated after it has been granted? | 2 | 1 |
| d. What is the function of biosafety cabinet? | 3 | 1 |
| e. Explain “Risk assessment as an important biosafety step in R&D”. | 4 | 1 |

PART – C: (Long Answer Questions)

(6 x 5 = 30 Marks)

- | <u>Answer ANY FIVE questions</u> | Marks | [CO#] | [PO#] |
|---|-------|-------|-------|
| 3. Explain in detail about the role Intellectual property rights (IPR) in development of economy of a nation. | (6) | 1 | 1 |
| 4. What equips the Trade Related Intellectual property rights (TRIPS) as more effective tool to protect the rights of an inventor and explain it? | (6) | 1 | 1 |
| 5. With the help of an appropriate example, discuss patenting of micro-organisms | (6) | 2 | 1 |
| 6. Write down in detail about the procedure of patent granting in India. | (6) | 2 | 1 |
| 7. Explain biosafety guidelines by Government of India. | (6) | 3 | 1 |
| 8. Discuss about the Genetically Modified Organisms (GMO) applications in food and agriculture. | (6) | 3 | 1 |
| 9. Discuss about the Ethics in clinical trials and good clinical practice (GCP), Ethical, Legal and Social Issues(ELSI) & Human genome projects | (6) | 4 | 1 |
| 10. Explain about the Ethics in human cloning. | (6) | 4 | 1 |

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