

BIOETHICS & IPR
(BTC2231)

Time Allotted : 2½ hrs

Full Marks : 60

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 4 (four) from Group B to E, taking one from each group.*

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

Group – A

1. Answer any twelve:

12 × 1 = 12

Choose the correct alternative for the following

- (i) Plagiarism is
 - (a) Quoting with citation
 - (b) Submitting other's work as own work
 - (c) Submitting your own previously published work again
 - (d) (b) and (c) both
- (ii) IPR protect the use of information and ideas that are of:
 - (a) Ethical Value
 - (b) Commercial Value
 - (c) Traditional Value
 - (d) None of the Above
- (iii) Which of the following technique is facing bioethical issues?
 - (a) DNA microarray
 - (b) Florescent activator cell sorter
 - (c) Embryonic cell therapy
 - (d) All of the above
- (iv) Preclinical trial do not involve
 - (a) in vitro model
 - (b) in vivo animal model
 - (c) both in vivo animal model and in vitro animal model
 - (d) human model
- (v) A person is entitled to apply for patent if he is
 - (a) True and first inventor
 - (b) An assignee of the true and first inventor
 - (c) legal representative of the person
 - (d) All of these
- (vi) A patent may be granted if the invention is
 - (a) novel
 - (b) non-obviousness
 - (c) capable of industrial applicability
 - (d) all of the above

- (vii) By India patent Act 1970, a patent gives protection for
 (a) 14 years from the date of publication
 (b) 20 years from the date of publication
 (c) 10 years from the date of publication
 (d) 25 years from the date of publication
- (viii) GATT was implemented in India in the year
 (a) 2001 (b) 2002
 (c) 2004 (d) 2005
- (ix) Microsoft by Bill Gates is an example of which type of entrepreneurship?
 (a) Innovative (b) Agricultural
 (c) Social (d) Joint
- (x) "Startup India" scheme was launched in the year
 (a) 2014 (b) 2015
 (c) 2016 (d) 1980

Fill in the blanks with the correct word

- (xi) Full form of TRIPS _____
- (xii) The duration of design protection in India for ____ years.
- (xiii) TRIPS establishes minimum standards for the availability, scope and use of ____ forms of intellectual property.
- (xiv) The process of creating something new with value is called _____.
- (xv) Autograft refers to ____ and Allograft refers to _____.

Group - B

2. (a) Distinguish between *in vivo* and *ex vivo* gene therapy. Explain the types of postnatal gene therapy. [[CO1](Remember/LOCQ)]
- (b) There are risks involved in gene therapy. Justify this statement. [[CO1](Justify/HOCQ)]
- (c) Discuss briefly the recommendations proposed by HUGO ethics committee involving gene therapy research. [[CO1](Apply/IOCQ)]
- 4 + 4 + 4 = 12**
3. (a) Explain the basis behind ethical issues of both donor and recipient. [[CO2](Apply/HOCQ)]
- (b) What are the major ethical issues regarding procurement of organs and tissues? [[CO2](Apply/HOCQ)]
- (c) Is euthanasia ethically correct? Justify by using a case study. [[CO2](Justify/HOCQ)]
- 4 + 4 + 4 = 12**

Group - C

4. (a) Define r-DNA guideline for modern drug design. [[CO2](Understand/HOCQ)]

- (b) Explain different level of biosafety in biotechnology work. [[CO3](Remember/LOCQ)]
6 + 6 = 12
5. (a) Write the name of different regulatory bodies and their functions in the field of biotechnology in India. [[CO3](Analyse/HOCQ)]
 (b) Explain the biosafety concern related to GM crops. [[CO3](Remember/LOCQ)]
6 + 6 = 12

Group - D

6. (a) Define rights, duties and their correlation. [[CO4](Analyse/HOCQ)]
 (b) Explain the concept of property. [[CO4](Remember/LOCQ)]
 (c) What do you understand by the term infringement? [[CO4](Apply/IOCQ)]
 (d) Explain the remedies against infringement. [[CO4](Apply/IOCQ)]
4 + 2 + 2 + 4 = 12
7. (a) Why product of nature cannot be patented? [[CO4](Remember/HOCQ)]
 (b) What do you understand by product patent and process patent? [[CO4](Remember/IOCQ)]
 (c) Explain the rights and obligations of patentee. [[CO4](Remember/IOCQ)]
2 + (3 + 3) + (2 + 2) = 12

Group - E

8. (a) State the benefits of start-up India. [[CO5](Understand/LOCQ)]
 (b) Explain the objectives of made in India? [[CO5](Apply/IOCQ)]
 (c) Analyse the entrepreneurship development cycle. [[CO5](Analyse/IOCQ)]
4 + 4 + 4 = 12
9. (a) Discuss about problems and difficulties faced by entrepreneurs. [[CO5](Apply/IOCQ)]
 (b) Analyse the objectives of entrepreneurial training. [[CO5](Analyse/HOCQ)]
 (c) Illustrate with a flow-chart and explain the Maslow's Need theory. [[CO5](Illustrate/IOCQ)]
4 + 4 + 4 = 12

Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	22.92	37.50	39.58

