

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) _____ includes rules of conduct that may be used to regulate our activities concerning biological world.
 - (a) Bio-piracy
 - (b) Bio-safety
 - (c) Bioethics
 - (d) Bio-patents
- (ii) The history of ethical regulations governing research on human subjects research began with the
 - (a) Nuremberg Code
 - (b) Declaration of Helsinki
 - (c) Belmont Report
 - (d) All of the above
- (iii) 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
- (iv) 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
- (v) What does an IP right entitle a person?
 - (a) Right to file a suit in case of an infringement
 - (b) Right to commercial exploitation
 - (c) Right of excludability
 - (d) All of the above
- (vi) Protection in a patent is granted by virtue of what is mentioned in the
 - (a) claims
 - (b) explanation
 - (c) descriptive part of specifications
 - (d) illustrations

- (vii) By India patent act 1970, a patent gives protection for
 (a) 14 years from the date of publication
 (b) 20 years from date of grant
 (c) 21 years from the next calendar year in which the patent is granted
 (d) none of these
- (viii) The Government of India became a signatory to TRIPS after joining the WTO in the year
 (a) 1990 (b) 1995 (c) 2000 (d) 2003
- (ix) Which of these is not a challenge for entrepreneur?
 (a) Managing the cash flow of their business
 (b) Recruiting new employees
 (c) Choosing the product or service to sell in the market
 (d) Formulating rules and regulations relating to conduct of entrepreneurship in their country
- (x) The idea generation process of entrepreneurship are
 (a) Germination (b) Preparation
 (c) Incubation (d) All of these

Fill in the blanks with the correct word

- (xi) According to Belmont report, research involving human subjects demand ____.
- (xii) Autograft refers to ____ and Allograft refers to ____.
- (xiii) Full form of GATT _____
- (xiv) According to the Indian version, copyright is valid for a period of ____ years after the death of the author.
- (xv) Which quality involves the ability to identify and exploit business opportunities ____.

Group - B

2. (a) Illustrate with a diagram the mechanism of action of suicide gene therapy. [[CO1](Apply/IOCQ)]
 (b) Discuss the mechanism of treatment of sickle cell anaemia. [[CO1](Apply/IOCQ)]
 (c) What is meant by genetic privacy? [[CO1](Understand/LOCQ)]
 (d) Why the function of genetic counsellors is essential for maintenance of genetic privacy? [[CO1](Apply/IOCQ)]
4 + 4 + 2 + 2 = 12
3. (a) What are two main stages of rejection of tissues in transplant of organs? [[CO2](Remember/LOCQ)]
 (b) What are the three main clinical manifestations of rejection? [[CO2](Remember/LOCQ)]
 (c) Distinguish between nonspecific and specific immunosuppressive therapy. [[CO2](Apply/IOCQ)]
 (d) Give an account of xenotransplantation along with its problems. [[CO2](Apply/IOCQ)]
3 + 3 + 3 + 3 = 12

Group - C

4. (a) "Inform consent is necessary in biotechnology research" Justify this statement with three real examples from biotechnology. [[C03](Understand/IOCQ)]
 (b) Write short notes on any three of the following:
 (i) Guide lines of DBT
 (ii) Good clinical practises
 (iii) Biosafety regulations in India
 (iv) Protection of public health. [[C03](Understand/LOCQ)]
6 + (3 × 2) = 12
5. (a) Why good manufacturing practises (GMP) is essential today? [[C03](Understand/LOCQ)]
 (b) Explain r-DNA guidelines for animal cell culture laboratory. [[C03](Remember/LOCQ)]
 (c) Define biohazards. [[C01](Remember/IOCQ)]
5 + 5 + 2 = 12

Group - D

6. (a) Explain the following in detail with reference to patentable invention. Novelty. Non-obviousness, utility and feasibility. [[C04](Understand/IOCQ)]
 (b) What do you understand by the term "most favoured nation"? [[C04](Understand/IOCQ)]
8 + 4 = 12
7. (a) Explain in brief the main objective of WTO. [[C04](Remember/IOCQ)]
 (b) Define trade mark and trade secret. [[C04](Remember/LOCQ)]
 (c) Define industrial design. How it can be protected? [[C04, C02](Understand/IOCQ)]
4 + 4 + 4 = 12

Group - E

8. (a) Why one should have a business plan? [[C05](Understand/LOCQ)]
 (b) In entrepreneurship you should implement a business plan. Justify this statement. [[C05](Justify/HOCQ)]
 (c) Classify the different types of business plans. [[C05](Apply/IOCQ)]
 (d) Deduce the key features in the economics of business. [[C05](Apply/IOCQ)]
3 + 3 + 3 + 3 = 12
9. (a) Justify the SWOT analysis of a business plan. [[C06](Justify/HOCQ)]
 (b) What are advantages and disadvantages of franchising? [[C06](Remember/LOCQ)]
 (c) Describe briefly the functions of an entrepreneur. [[C06](Understand/LOCQ)]
 (d) What are the theories of entrepreneurship? [[C05](Apply/IOCQ)]
3 + 3 + 3 + 3 = 12

Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	38.54	55.21	6.25

