

G-4/407/21

Roll No.

M.Sc. IV Semester Examination, 2021

BIOTECHNOLOGY

Paper III

(IPR, Biosafety Bioethics and Nanobiotechnology)

Time : 3 Hours]

[Max. Marks : 80

Note : All questions are compulsory. Question Paper comprises of 3 sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.

SECTION A

1×8=8

(Objective Type Questions)

Choose the correct answer :

- 1.** IPR protect the use of information and ideas that are of :
(a) Social value
(b) Moral value
(c) Commercial value
(d) Ethical value
- 2.** Trade mark :
(a) is represented graphically

P.T.O.

[2]

- (b) is capable of distinguishig the goods or services of one person from those of others
- (c) may includes shapes of goods or combination of colours
- (d) All of the above
- 3.** Which one includes rules of conduct that long may be used to regulate our activities concerning the biological world ?
(a) Bio-piracy (b) Bio-safety
(c) Bio-ethics (d) Bio-patents
- 4.** Nanomaterials target that rare causing cells and remove them from blood.
(a) Tumour (b) Fever
(c) Infection (d) Cold
- 5.** Nanomaterials are the materials with at least one dimension measuring less than
(a) 1 nm (b) 10 nm
(c) 100 nm (d) 1000 nm
- 6.** Who first used the term nanotechnology and when ?
(a) Richard Feynman, 1959
(b) Norio Taniguchi, 1974
(c) Eric Drexler, 1986
(d) Subio Lijima, 1991

G-4/407/21

7. 'There is plenty of room at the bottom'. This was stated by

- (a) Eric Drexler (b) Richard Feymann
(c) Harold Croto (d) Richard Smalley

8. Name the field in which the nanoparticle are used with silica coated iron-oxide.

- (a) Magnetic Application
(b) Electronics
(c) Medical Dignosis
(d) Structural and mechanical materials

SECTION B

6×4=24

(Short Answer Type Questions)

Note : Attempt one questions from each unit.

Unit-I

1. What are the characteristics of IPR ?

Or

How to protect intellectual property rights in the innovation process ?

Unit-II

2. What is Bio-ethics in health care ?

Or

What about the heath rise from GMOs ?

G-4/407/21

P.T.O.

Unit-III

3. Explain in detail with examples nanomaterials of different size and shape.

Or

Write a note on nanopore structure and their importance and applications.

Unit-IV

4. List out applications of nanoparticle for diagnostic, explain them.

Or

Write on the special features of nanoparticles implication in cancer therapy.

SECTION C

12×4=48

(Long Answer Type Questions)

Note : Attempt one questions from each unit.

Unit-I

1. What are the types of IPR ? Explain in detail with suitable examples.

Or

What is Bio-entrepreneurship ? Explain the process, type of Bioindustries in brief.

G-4/407/21

Unit-II

2. How will you differentiate Biosafety and Biohazards ?

Or

How can Genetically engineered food profit driven agricultural biotechnology meet the basic needs of the farmers ?

Unit-III

3. Explain basic biological concepts and historical perspective for the development of nano-biotechnology.

Or

Discuss the classification of nanomaterials in detail.

Unit-IV

4. Explain with suitable examples specific thin films of nanoparticles and their synthesis and applications.

Or

Discuss in detail of nanodevice for biosensor development.

★ ★ ★ ★ ★ c ★ ★ ★ ★ ★