

**U.G. 6th Semester Examination - 2020****MICROBIOLOGY****Course Code: BMCBDSHT6****Course Title: Biosafety and Intellectual Property Rights**

Full Marks : 40

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Choose the correct alternative of the following (any **ten**): 1×10=10

a) Biosafety is working safely with biological material or organisms with potential to cause disease in

- i) Animals
- ii) Plants
- iii) Humans
- iv) All the above

b) Which of the following are considered ideal biological weapons agents and subject to biosecurity measures?

- i) *Bacillus anthracis*
- ii) *Escherichia coli*
- iii) *Clostridium tetai*
- iv) *Vibrio cholerae*

c) The HEPA filter is a Biosafety Cabinet filter particulates to size \_\_\_\_\_ and are 99.97% efficient.

- i) 0.03 μm
- ii) 0.3 μm
- iii) 0.01 μm
- iv) 0.1 μm

d) GMO stands for

- i) Genetically Made Organisms
- ii) Genetically Modified Organisms
- iii) Generically Moderated Organisms
- iv) Generally Made Organisms

- e) Geographical indications can be used for–
- Agricultural Products
  - Handicrafts
  - Food stuff
  - All of the above
- f) In which country are the most GM crops grown?
- India
  - China
  - US
  - UK
- g) The first transgenic crop of India is–
- Bt Brinjal
  - Bt Cotton
  - Bt Tobacco
  - Bt Soyabean
- h) The currently operative Indian Patents Acts was passed in the year–
- 1970
  - 1972
  - 1974
  - 1976
- i) WIPO was established in the year–
- 14th March, 1959
  - 14th Oct, 1960
  - 14th Aug, 1965
  - 14th July, 1967
- j) The works protected by Copyrights include–
- Literary works
  - Musical works
  - Dramatic works
  - All of the above
- k) Trademark offers protection to–
- a design
  - an invention
  - logos, names and brand
  - All of the above
- l) The patent granted in India is applicable in
- India
  - India and US
  - India and China
  - All over the world

- m) How many patent offices are there in India?
- 3
  - 4
  - 5
  - 6
- n) The process of removal and replacement of damaged tissues or organs with healthy ones from a donor is called as–
- Transplantation
  - Replacement therapy
  - Repair and replacement
  - None of the above
- o) Genomics can be used in agriculture to–
- generate new hybrid strains
  - improve yield
  - improve disease resistance
  - All of the above

2. Answer any **five** of the following questions:  
 $2 \times 5 = 10$

- What is copyright?
- What is patent infringement?
- What is trade secret?
- Name the products that has got GI tag in India.

- What is the term for GI protection?
- What is biopiracy?
- What is Biosafety level 2?
- How does utility patent differ from a design patent?

3. Answer any **two** of the following questions:  
 $5 \times 2 = 10$

- What are GM crops? What are the risks associated with GM crops?  $2+3$
- Write short notes on Plant Breeder's Rights (PBR). What are the criteria for protection of plant variety under provisions of UPOV 1991 Act?  $3+2$
- What is Cartagena protocol on Biosafety? What is the basic difference between Biosafety and Biosecurity?  $3+2$

4. Answer any **one** of the following questions:  
 $10 \times 1 = 10$

- What is patent? What are the chief requirements for the grant of a patent? What is the procedure for obtaining patent?  $2+3+5$

- b) Write short notes on:
- i) Biosafety level
  - ii) Process of genetic modification of organisms. 5+5
- c) Describe the main forms of Intellectual Property Rights (IPR) protection. What is the importance of IPR? What is domain name? 6+2+2
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