



LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

P.G. DEGREE EXAMINATION – CROSS DISCIPLINARY

SECOND SEMESTER – APRIL 2025

PBT2CD01 – BIOTECHNOLOGY AND HEALTH



Date: 05-05-2025

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A – K1 (CO1)

Answer ALL the questions

(5 x 1 = 5)

1 Choose the best option

- a) Which disease is caused by Mycobacterium?
i) TB ii) Measles
iii) Chicken pox iv) HIV
- b) An example of protein based vaccine is
i) Novax ii) Coxoid
iii) Redaxinir iv) Moderna's mRNA-1273.222
- c) Bt genes are used in controlling
i) Insects ii) Fungus iii) Bacteria iv) Amoeba
- d) Which of the following is a plant based source of omega -3 fatty acids.
i) Flaxseed ii) Chiaseed iii) walnuts iv) algae
- e) A person with a hereditary disease can be used with the help of
i) gene therapy ii) Cloning
iii) dialysis iv) chemotherapy

SECTION A – K2 (CO1)

Answer ALL the questions

(5 x 1 = 5)

2 Answer in one or two sentences

- a) Expand SARS.
- b) What is covid19?
- c) Can people who are living with HIV do to avoid passing the virus to others?
- d) List out any two key aspects of GCP in India.
- e) Why is research ethics necessary?

SECTION B – K3 (CO2)

Answer any THREE of the following

(3 x 10 = 30)

- 3 Explain the importance of a balanced diet.
- 4 Mention the differences between communicable and non-communicable diseases with examples.
- 5 Give a note on peptide vaccine.
- 6 Justify the fact that genetic engineering is a modern biotechnological tool in improving food production.
- 7 Relate on the licensing procedures for clinical research in India.

SECTION C – K4 (CO3)

Answer any TWO of the following

(2 x 12.5 = 25)

- 8 Categorize water-soluble and fat-soluble vitamins and discuss their significance as well as the syndromes associated with their deficiencies

9	Discuss the advantages of GM foods
10	Describe the origin of therapeutic proteins and its applications in medicine
11	Classify vaccines giving suitable examples.
SECTION D – K5 (CO4)	
	Answer any ONE of the following (1 x 15 = 15)
12	Elaborate on tuberculosis infection, its diagnostic methods, and enumerate the types of medications utilized in treating TB
13	What are the antibiotic resistance genes in GM foods and how do they affect human health? Justify
SECTION E – K6 (CO5)	
	Answer any ONE of the following (1 x 20 = 20)
14	Elaborate on the applications of probiotics
15	Design a research study to investigate the role of Bt genes in protection of food crops

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