

C 20265

(Pages : 2)

Name.....

Reg. No.....

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
MARCH 2022**

Zoology

ZOL 6B 14—BIOTECHNOLOGY, MICROBIOLOGY AND IMMUNOLOGY

(2014 to 2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part AI. One word questions. Answer *all* questions. Each question carries 1 mark :

- 1 Misfolded proteins that have the ability to manifest diseases are called _____.
- 2 Give an example of neutral media.
- 3 Name two vitamins produced by intestinal microflora.
- 4 Expand VNTR.
- 5 Name a protozoan observed as commensal in the large intestine of humans.
- 6 Name the enzyme which is called molecular scissors.
- 7 Phagocytosing activity of immune system is performed by _____.
- 8 The lymphoid organ getting affected in Grave's disease _____.
- 9 'Bt' stands for _____ in Bt cotton.
- 10 Name the organism whose genome got sequenced first.

(10 × 1 = 10 marks)

Part BII. Short answer questions. Answer any *ten* questions. Each question carries 2 marks :

- 11 Give an account of Biosensors.
- 12 Write short notes on slime moulds.
- 13 What is pBR322 ?
- 14 Give an account of biofiltration.
- 15 Illustrate the structure of a virus.
- 16 Write short notes on monoclonal antibodies.

Turn over

- 17 What are dendritic cells ?
- 18 Give an account of tumor antigens.
- 19 Write short notes on Rickettsia.
- 20 What is Southern Blotting ?
- 21 Write short notes on attenuated vaccines.
- 22 What are plasmids ?

(10 × 2 = 20 marks)

Part C

III. Paragraph questions. Answer any *five* questions. Each question carries 6 marks :

- 23 Give an account to steroid production by Industrial fermentation.
- 24 Write the principles and applications of ELISA
- 25 Give an account of effects of environment on microbial growth.
- 26 Briefly explain agglutination inhibition reaction.
- 27 Distinguish between VNTR and STR.
- 28 Give an account of organs of immune system.
- 29 Write the causative agents, symptoms and treatment of diseases caused by a virus, bacteria and protozoa.
- 30 Explain Myasthenia gravis.

(5 × 6 = 30 marks)

Part D

IV. Essay questions. Answer any *two* questions. Each question carries 10 marks :

- 31 Give an account of structure and class of immunoglobulins.
- 32 With suitable illustrations explain the steps involved in recombinant DNA technology. Add a note on various enzymes involved in genetic engineering.
- 33 Briefly explain the basic microbiological techniques that can be used to study a bacterium.
- 34 What is DNA fingerprinting ? Write down it's methodology and practical applications.

(2 × 10 = 20 marks)