

C 40441

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Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2013

(CCSS)

Zoology

ZO 6B 16—Core X—BIOTECHNOLOGY, MICROBIOLOGY AND IMMUNOLOGY

Maximum : 30 Weightage

Time : Three Hours

*Answers may be written either in English or in Malayalam.
Give illustrations wherever necessary.*

I. Answer all twelve questions. Each question carries $\frac{1}{4}$ Weightage :

A. Objective type questions :

1 _____ is the capacity to produce disease :

- | | |
|--------------------|----------------|
| (a) Pathogenicity. | (b) Virulence. |
| (c) Attenuation. | (d) Passage. |

2 Inflammation is influenced by Histamine, which is released by :

- | | |
|-----------------|-------------------|
| (a) Eosinophil. | (b) Erythrocytes. |
| (c) Platelets. | (d) Basophils. |

3 Sleeping sickness is caused by :

- | | |
|------------------|-----------------|
| (a) Euglena. | (b) Plasmodium. |
| (c) Trypanosome. | (d) Nematode. |

4 Vaccination protects us from infectious disease by generating Memory :

- | | |
|------------------|------------------|
| (a) Stem cells. | (b) Lymphocytes. |
| (c) Macrophages. | (d) Antigen. |

B. Name the following :—

5 Who coined the term Biotechnology ?

6 Mycoplasmas lack what structures ?

7 What is the term given to the inactivation of a toxin by an antibody ?

8 What is the term given to the fusion between a plasma cell and a Tumour cell ?

C. Fill up the blanks :

9 _____ is the first artificial vector developed by Bolivar and Rodriguez from E coil plasmid.

10 _____ are viruses that infect bacterial cells after injecting their Genetic material and kill them.

Turn over

- 11 The process by which a medium or surface is freed of all living microorganism is called _____.
- 12 _____ is an electronic device that uses biological molecules or cells to detect specific compound
($12 \times \frac{1}{4} = 3$ weightage)

II. Short Answer Questions. Answer all *nine* questions :

- 13 Define Bioremediation.
- 14 What is an Antibody ?
- 15 Define Cloning.
- 16 What is meant by Chromosome walking ?
- 17 What are Retroviruses ?
- 18 What is Electroporation ?
- 19 What are Mesosomes ?
- 20 What are Macrophages ?
- 21 What are Mast cells ?

($9 \times 1 = 9$ weightage)

III. Short answer questions. Answer any *five* questions :

- 22 Distinguish between RFLP and RAPD.
- 23 Distinguish between Pili and Fimbriae.
- 24 Distinguish between Passive and Active immunity.
- 25 Write notes on Plasmids.
- 26 Comment on the effect of temperature and PH on bacterial growth.
- 27 Define immunization and enumerate the principles of Vaccination.
- 28 Enumerate the salient features of viruses.

($5 \times 2 = 10$ weightage)

IV. Answer any *two* questions :

- 29 Write an essay on Transgenic Mammals.
- 30 Give a detailed account of the structure of a typical Bacterium.
- 31 Write an essay on the Cells and Organs involved in Immunity.

($2 \times 4 = 8$ weightage)