

5915

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- (c) Multi drug resistant bacteria
- (d) Role of prebiotics in human health
- (e) Innate immunity

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 5915 H

Unique Paper Code : 2234002005

Name of the Paper : GE: Microbiota: Importance
in Health & Disease

Name of the Course : B.Sc. (H) Zoology (NEP)

Semester : IV

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **any FOUR** questions in all.
3. **Question No. 1** is compulsory

1. (a) Define the following terms (1×6=6)

(i) Adaptive immunity

(ii) Gut-Microbiota

P.T.O.

- (iii) Periplasmic space
 - (iv) Bioterrorism
 - (v) Virulence
 - (vi) Granuloma
- (b) Distinguish between the following (1.5×4=6)
- (i) Resident flora and Transient flora
 - (ii) Probiotics and Prebiotics
 - (iii) Humoral immunity and Cell mediated immunity
 - (iv) Chicken pox and Shingles
- (c) Fill in the blanks (0.5×6=3)
- (i) The fungi _____ is used for the production of first commercial antibiotic _____.
 - (ii) Methanogens are _____.
 - (iii) T_H and T_c cells are related to _____ immunity.
 - (iv) After encounter with antigen, B cell becomes _____ and _____ plasma cell.

2. (a) Give a detailed account of the various bacterial diseases of the skin. (12)
- (b) Write a short note on trichiasis (3)
3. (a) Diagrammatically explain the cell mediated response against bacteria. (8)
- (b) Explain the bacterial endotoxins and exotoxins (7)
4. Give a brief description of the microbe that causes Tuberculosis. Give a detailed account of the symptoms, test, diagnosis, vaccine and preventive measures for the disease. (15)
5. Give an account of the following diseases and their causative agents. (7.5×2=15)
- (a) Syphilis
 - (b) Tetanus
6. Write short note on any three (5×3=15)
- (a) Factors affecting the children's gut microbiota
 - (b) Role of gut microbiome in GI cancer