

**2016**  
**ZOOLOGY — HONOURS**  
**Fifth Paper**  
**(Unit – I)**  
**Full Marks – 50**

*The figures in the margin indicate full marks*

*Candidates are required to give their answers in their own words as far as practicable*

1. Answer *five* questions from the following : 2×5
- (a) What is sterilization?
  - (b) Mention the control strategy of cholera.
  - (c) What is acid fast staining?
  - (d) Define adjuvant. Give examples.
  - (e) What is FLASH pasteurization?
  - (f) What is 'bursa of Fabricius'?
  - (g) Distinguish between differential media and selective media.
  - (h) Distinguish between monoclonal and polyclonal antibody.
  - (i) Distinguish between Isotypic determinants and Idiotypic determinants of Antibody.

**Group – A**

Answer *any one* from the following questions

2. (a) State in brief the pathogenicity and control measures of Shigellosis. 3+2
- (b) Describe the phases involved in bacterial growth curve. 5
3. (a) What is batch culture? Add a note on preservation of pure culture of microbes. 2+3
- (b) Discuss the method of isolation of a particular type of microorganism studied by you. 5

[Turn Over]

## Group – B

Answer *any two* from the following questions

4. (a) Give a note on mutualism and commensalism with suitable examples. 3+3  
 (b) Define Zoonosis. Name Zoonotically transmitted helminthic diseases (atleast three) mentioning their causative organisms and modes of transmission. 1+3
5. Draw a neat labelled diagram of trophozoite of *Entamoeba histolytica*. Briefly describe the life cycle of *E. histolytica* and mention the clinical features and control measures of the disease caused by it. 2+4+4
6. (a) What is Loeffler's syndrome? Schematically represent the life cycle of *Ascaris* sp. and briefly point out the pathogenicity caused by it. 2+3+2  
 (b) Give a schematic representation of life cycle of *Plasmodium falciparum* in man. 3

## Group – C

Answer *any one* from the following questions

7. (a) Describe the antigen processing and presentation by the APCs with suitable diagram. 4+2  
 (b) What are cytokines? Mention their biological properties. 1+3
8. What is innate immune response? How does innate immunity differ from acquired immunity? How do host components distinguish the pathogens in innate immunity? Discuss in brief, different types of innate immune mechanisms you have studied. 1+2+1+6