

2020

ZOOLOGY — HONOURS

Fifth Paper

(Unit - II)

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 **any two** questions from the following : 10×2
- (a) What is  $\gamma$ -globulin? State its importance.
  - (b) Distinguish between Amastigote and Promastigote forms of *Leishmania donovani*.
  - (c) State the cause of chill and rigour in Malaria.
  - (d) State differences between gram positive and gram negative bacteria.
  - (e) Write structural features of IgM and IgG.
  - (f) What is opsonisation?
  - (g) What is PKDL? Mention its symptoms.
  - (h) What do you mean by Humoral immunity?

**Group - A**

Answer **any one** question from the following.

2. (a) Discuss the Life cycle of *Plasmodium vivax* in mosquito with a schematic diagram. What is signet ring stage? 6+3+6
- (b) Discuss the transmission and control measures of *Ascaris lumbricoides*.
3. (a) Discuss the morphology and importance of Cercaria in *Fasciola hepatica*.
- (b) Distinguish among Carrier, Vector and Host. 7+4+4
- (c) State the stages of development of *Wuchereria bancrofti* in mosquito.
4. Write on the following (**any three**) : 5×3
- (a) Hypnozoites and Haemozoin.
  - (b) Phases of bacterial growth.
  - (c) Sterilization and pasteurization.

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- (d) Rhabditiform larva.
- (e) Parasitism and Commensalism.
- (f) Parasitic adaptations of helminth parasites.

5. Write short notes on **any two** of the following : 7½×2
- (a) Vector potentiality of *Anopheles culicifacies*.
  - (b) Life cycle and pathogenicity of *Shigella* sp.
  - (c) Encystation and excystation of *Entamoeba histolytica*.
  - (d) Classification of bacteria on the basis of staining and its importance.

**Group - B**

Answer **any one** question from the following.

6. Write short notes on (**any two**) : 7½×2
- (a) Activation and differentiation of B-cell.
  - (b) Structure of a typical Antibody molecule.
  - (c) Macrophage and its function.
  - (d) Innate Immunity in Invertebrates.
7. (a) What is ADCC? Discuss in brief the ADCC in man.
- (b) Discuss how exogenous and endogenous Antigens are processed and presented to the Immune system. 2+6+7
8. (a) Distinguish between T<sub>H</sub> and T<sub>cyt</sub> cells.
- (b) State the importances of : (i) TNF (ii) IFN-γ (iii) Adjuvants. 3+3+9
9. Write on the following (**any three**) : 5×3
- (a) Complements and its function.
  - (b) Properties and function of Cytokines.
  - (c) Role of HAT medium in monoclonal antibody production.
  - (d) Bursa of Fabricius and its function.
  - (e) Cell mediated immunity in molluscs.
  - (f) Structures of MHC 1 and MHC 2 with suitable diagram.
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