

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 γ -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.
- (c) State the stages of development of *Wuchereria bancrofti* in mosquito. 7+4+4
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_H and T_{cyt} 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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