

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FIFTH SEMESTER EXAMINATION, DECEMBER 2019

THIRD YEAR (BATCH 2017-20)

ZOOLOGY (Honours)

Paper : V

Date : 12/12/2019

Time : 11 am – 1 pm

Full Marks : 50

1. **Answer any five questions:**

[5×2]

- What is Hapten?
- Explain the term Cluster of differentiation (CD)?
- What are periaarterial lymphatic sheaths (PALS)?
- Write down the scientific names of 'old world' & 'new world' hookworms.
- Write down functions of T_{REG} cells.
- State the immunological significance of mucosa associated lymphoid tissue (MALT).
- What is the difference between target cells and APCs?
- What is superantigen?

2. **Answer any four questions:**

[4×10]

- Distinguish between antigenicity and immunogenicity.

Explain the Delayed type hyper-sensitivity reaction with proper diagram.

Why Type II hypersensitivity is known as ADCC?

What is an adjuvant? Give example.

[2+3+3+2]

- Explain the occurrence of hepatic encephalopathy during liver cirrhosis.

What is Wilson's disease?

Depict the role of Disease Modifying Anti-rheumatic Drugs (DMARDs) in the management of Rheumatoid Arthritis.

What is Gestational diabetes?

[3+2+3+2]

- Briefly explain how myeloid progenitor cell gives rise to macrophage.

Write down important features of NK cells.

What is follicular dendritic cell?

Mention the CD markers for human myeloid and plasmacytoid dendritic cell subsets.

What do you mean by thymus-dependent and thymus-independent area of lymph nodes?

[3+2+3+2]

- d) Differentiate between endemic, epidemic and pandemic disease with example.

Briefly discuss about larval migration and transformation into adult of hookworm.

Give an account on pathogenicity of *S. haematobium*.

What is metacystic trophozoite?

[3+3+3+1]

- e) Describe the typical structure of immunoglobulin with suitable diagram.

Compare IgA and IgM.

What is membrane attack complex?

[(3+2)+3+2]

- f) Describe the structures of class I and class II MHC molecules.

How exogenous antigens are presented by endocytic pathway?

[3+3+4]

- g) Write short notes (**any two**):

[2×5]

i) Hybridoma technology

ii) Double immunodiffusion reaction

iii) Antigenic determinants of immunoglobulins

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