

2022

M.Sc.

2nd Semester Examination

ZOOLOGY

PAPER—ZOO-203

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

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

Illustrate the answers wherever necessary.

ZOO-203.1 MOLECULAR BIOLOGY

1. Answer any *two* questions : 2×2
- (a) Find out the differences between Cox II DNA and RNA.
- (b) What is the necessity of translational 'accommodation'?

(Turn Over)

- (c) What is the structure of replicator in *E.coli* ?
- (d) What is polymerase switching ?

2. Answer any *two* questions : 2×4

- (a) How are replicators inactivated during DNA replication in a eukaryotic chromosome ?
- (b) What are the implications of 'shelterin' protein in telomerase action on human telomere ?
- (c) Describe the mechanism of RNA editing with diagram in Trypanosomatid.
- (d) Describe a model for slicer activity of Argonaute in *Drosophila*.

3. Answer any *one* question : 1×8

- (a) How is RNA-induced silencing complex (RISC) formed in *Drosophila* ?
- (b) How are helicase loading and activation regulated in eukaryote replication ?

ZOO-203.2 PARASITOLOGY

4. Answer any *two* questions : 2×2
- (a) What is Zoonosis? Mention different types of Zoonosis.
 - (b) What do you mean by parasitoid and hyperparasite? Give example.
 - (c) What is papatasi fever? Comment on PKDL.
 - (d) What is glycocalyx? Mention its functions.
5. Answer any *two* questions : 2×4
- (a) Enlist cytoskeletal proteins found in trophozoite of Giardia. Schematically represent the binary fission and conjugation process occurs in Balantidium. 1+3
 - (b) Differentiate between classical and occult filariasis. Mention the distinctive features of *Schistosoma* sp. 2+2
 - (c) Enumerate the ultrastructural features of the cestode tegument.
 - (d) Distinguish between Hard tick and Soft tick. Give example of each.

6. Answer any one question : 1×8

(a) Describe in brief life cycle, pathogenecity and prophylexis of *Paragonimus westermani*.

5+2+1

(b) What are the common symptoms of acute phase of lymphatic filariasis? How microfilaria of *Wuchereria* differs from microfilaria of *Brugia*? What are biological incubation period and clinical incubation period?

3+3+2

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