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PG CBCS
M.Sc. Semester-II Examination, 2021
ZOOLOGY
PAPER: ZOO 203

Full Marks: 40**Time: 2 Hours**

The figures in the right-hand margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable.

Group-203.1**(Marks: 20)****(MOLECULAR BIOLOGY)****Answer TWO questions of the following:****10X2=20**

1. a. Describe the process of replication in prokaryotes.
- b. What is the difference between DNA replication in prokaryotes and eukaryotes?
- c. Highlight initiation of replication in prokaryotes. 4+3+3
2. a. Elaborate the role of transcription factors in eukaryotic transcription initiation.
- b. How does termination of transcription occur in prokaryotes? 5+5
3. a. Illustrate the process of elongation in prokaryotic translation
- b. State briefly the formation of initiation complex in prokaryotic translation. 5+5
4. Write short notes on the following (any four): 2.5x4
 - a. The importance of the G–U base pairs in RNA editing.
 - b. End replication problem.
 - c. The importance of Shine Dalgarno sequence.
 - d. Polymerase switching
 - e. Function of telomerase

Group-203.2**(Marks: 20)****(PARASITOLOGY)****Answer TWO questions of the following:****10x2=20**

1. Differentiate between commensalism and mutualism with example. Describe in brief the life cycle and pathogenicity of *Paragonimus sp.* What is Zoonosis? 3+5+2

(P.T.O.)

(2)

2. Write the significance of the ultrastructural study of helminth cuticle. Draw a labeled diagram of Trematode tegument. What are perikarya and glycocalyx? Mention their functions. 2+4+2+2
3. Describe briefly the life cycle of *Leishmania sp.* What is anterior station type of development? Distinguish between soft tick and hard tick with example. 5+2+3
4. Write short notes on any four : 2.5x4
- a. Primary and secondary infection
 - b. PKDL
 - c. Landscape epidemiology
 - d. Pathogenicity of filariasis
 - e. Hyperplasia and Hypertrophy
 - f. Significance of *Aedes* mosquito in disease propagation
