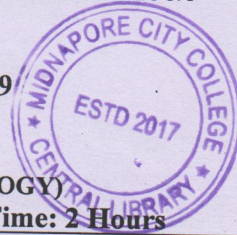


PG (NEW) CBCS
M.Sc. Semester-II Examination, 2019
ZOOLOGY
PAPER: ZOO-203
(MOLECULAR BIOLOGY & PARASITOLOGY)



Full Marks: 40

Time: 2 Hours

Use separate Answer-scripts for Group-A & Group-B

GROUP-A

Molecular biology

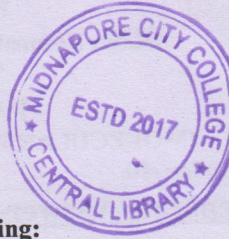
Marks-20

1. Answer any two questions of the following: $2 \times 2 = 4$
- What catalyzes the opening and placement of sliding clamps on the DNA?
 - What effect will deletion of the trpL region of trp operon have on the rate of synthesis of tryptophan synthetase enzyme?
 - What do you mean by DNA proof reading?
 - Why can transcription and translation happen simultaneously for an mRNA in bacteria?
2. Answer any two questions of the following: $2 \times 4 = 8$
- Describe briefly the role of palm domain of *E. coli* DNA polymerase.
 - Briefly print out about 'Mismatch repair'.
 - Illustrate briefly the initiation mechanism in eukaryotic transcription.
 - Characterise Ori C in *E. coli*.
3. Answer any one question of the following: $1 \times 8 = 8$
- Describe briefly the interaction of the basal transcription factors in correct sequence in the formation of open complex during eukaryotic transcription machinery. $5.5 + 2.5$
 - State the function of RNA component of human telomerase.
 - What is promoters in eukaryotic? What is the difference between eukaryotic and prokaryotic transcription termination? Give the overview of pre mRNA processing in eukaryotic. $2 + 3 + 3 = 8$

(Turn over)

(2)

GROUP-B
Parasitology
Marks-20



4. **Answer any two questions of the following:** 2×2=4
- a) What do you mean by endoparasite and ectoparasite?
 - b) What do you mean by mechanical and biological transmission?
 - c) What do you mean by Cs protein? Mention its functions.
 - d) i) What is schistosomule?
 ii) Name the cytoskeletal proteins found in trophozoite of Giardia
5. **Answer any two questions of the following:** 2×4=8
- a) 'The vertebrate gut is a suitable habitat for microorganism'- Discuss. 4
 - b) Enumerate the ultrastructural feature of the trematode tegument. 4
 - c) Distinguish between amastigote and pathogenicity form of Leishmania.
 What is PKDL? 3+1
 - d) Define zoonosis with example. Comment on pathogenicity of lymphatic filariasis. 1+3
6. **Answer any one question of the following:** 1×8=8
- a) Describe briefly the life cycle pathogenicity of Trypanosome. Write the treatment procedure of it. 4+2+2=8
 - b) i) State briefly the host and environment factors in epidemiology of kala-azar.
 ii) Write short notes on VSG gene. 5+3=8
