

U.G. 5th Semester Examination - 2021

ZOOLOGY

[HONOURS]

Discipline Specific Elective (DSE)

Course Code : ZOOL-H-DSE-T-02

Full Marks : 40

Time : 2½ Hours

The figures in the right-hand margin indicate marks.

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

1. Answer any **five** questions of the following: 2×5=10

- a) Differentiate between a pandemic and epidemic disease.
- b) What is a hfr cell?
- c) What is the role of normal flora in urinogenital tract?
- d) What are the constituents of a bacterial cell wall?
- e) Define transduction.
- f) What is chocolate agar?
- g) What is magnetosome? Mention its functions.
- h) What is acid fast staining?

2. Answer any **two** from the following questions

5×2=10

- a) Briefly describe the Gram staining procedure.

[Turn Over]

- b) Write down the Koch's postulates and its importance.
- c) What are the different strategies that a bacteria use to gain entry into host?
- d) Briefly describe the pathogenesis of *Salmonella typhi*, what is selective media?

3. Answer any **two** from the following questions:

10×2=20

- a) Describe the reverse transcription process in a HIV virus. How do CD8+ T cells combat HIV? Define chlorosome. 5+3+2
- b) How the bacterial chromosome is different from the eukaryotic chromosome? Describe the structure and functions of glycocalyx. What is the function of cyanophysin? 3+3+2+2
- c) Describe the conjugation process in bacteria. Differentiate between exo and endotoxin. 7+3
- d) Write a short note on bacterial culture. Write a note on nutritional requirements of bacteria. How bacterial growth is measured in a culture media? 4+4+2
