

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2017

(CUCBCSS—UG)

Zoology

ZOL 5B 09—GENERAL METHODOLOGY IN SCIENCE, BIO-STATISTICS AND INFORMATICS

Time : Three Hours

Maximum : 80 Marks

A. Answer *all* questions. Each carries 1 mark :

- 1 What is meant by experiment ?
- 2 Define plagiarism.
- 3 What is auxiliary hypothesis ?
- 4 What is digital divide ?
- 5 What is meant by sample ?
- 6 What is meant by biostatistics ?
- 7 What is software piracy ?
- 8 Give the full form of NICNET.
- 9 What is virtual reality ?
- 10 What is green computing ?

(1 × 10 = 10 marks)

B. Answer any *ten* questions in two or three sentences each. Each carries 2 marks :

- 11 What is scientific evidence ?
- 12 What is Section 17.1 (d) ?
- 13 What is deductive reasoning ? List its advantage.
- 14 Explain the importance of selection of controls in the design of experiment.
- 15 What is meant by models in science ? List any *two* roles of models.
- 16 What is goodness of fit ? Give an example.
- 17 What is meant by measures of central tendency ? List the different types.
- 18 What is sampling error ?
- 19 What is t-test ?

Turn over

20 What is bio-computing ?

21 What is information overload ? Mention its demerit.

22 What is e-governance ?

(10 × 2 = 20 marks)

C. Answer any *five* questions in not more than a paragraph each. Each carries 6 marks :

23 Give an account on different types of thought processes in developing hypothesis.

24 What is Intellectual Property Right ? Explain the concept.

25 Explain the different types of graphic representation of data.

26 Explain the differences between null hypothesis and alternate hypothesis.

27 Explain internet as a knowledge repository. Also, explain the different internet access methods?

28 Explain in detail any *three* threats in IT field.

29 Explain Cyber Laws.

30 Explain the applications of IT in medicine and healthcare.

(5 × 6 = 30 marks)

D. Write essays on any *two* of the following. Each carries 10 marks :

31 What is hypothesis ? What are the different types of hypothesis ? Explain the formulation and testing of hypothesis.

32 Write an essay on the different types of measures of central tendency. Explain the merits and demerits of each.

33 What is cyber-crime ? Explain in detail the different aspects of cyber-crimes.

34 Give a detailed account on INFLIBNET, NICNET and ERNET as academic services.

(2 × 10 = 20 marks)