

**FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2019**

(CUCBCSS—UG)

Zoology

**ZOL 5B 09—GENERAL METHODOLOGY IN SCIENCE, BIOSTATISTICS AND  
INFORMATICS**

Time : Three Hours

Maximum : 80 Marks

**Part A**I. One Word Questions. Answer *all* questions. Each carries 1 mark :

- 1 \_\_\_\_\_ refers to available facts which serve to support a hypothesis.
- 2 \_\_\_\_\_ is the imitation of a real thing, state of affairs, or process.
- 3 The recorded value of an experiment is \_\_\_\_\_.
- 4 \_\_\_\_\_ is the classified data presented in an orderly manner.
- 5 \_\_\_\_\_ is statistical table where the frequencies of preceding classes are added.
- 6 Illegal copying of software is called \_\_\_\_\_.
- 7 \_\_\_\_\_ is computer communication network for linking libraries and information senders in universities, colleges, UGC information centers and R&D institutions.
- 8 \_\_\_\_\_ is an interactive computer-generated experience taking place within a simulated environment.
- 9 Fraudulent act to obtain user names, passwords and credit card is \_\_\_\_\_.
- 10 A reliable program that keep computers safe from hackers is \_\_\_\_\_.

(10 × 1 = 10 marks)

**Part B**II. Short Answer Questions. Answer any *ten* questions. Each carries 2 marks :

- 11 What is knowledge ? Mention its types.
- 12 What is scientific proof ?
- 13 Define hypothetico-deductive model of hypothesis.
- 14 Definition and scope of biostatistics.
- 15 Write the equations used in grouped and ungrouped data for calculating arithmetic mean.

**Turn over**

- 16 What is a sample ? Mention sample size.
- 17 How to create cyber presence ?
- 18 Write a brief note on open access publishing models.
- 19 What is cyber addiction ?
- 20 What is e-governance ?
- 21 What is Dial-up ?
- 22 What are E-wastes ?

(10 × 2 = 20 marks)

### Part C

III. Paragraph Questions. Answer any *five* questions. Each carries 6 marks :

- 23 Explain theories and laws in science.
- 24 Explain the difference between inductive and deductive reasoning.
- 25 Explain depositories of scientific information.
- 26 Briefly describe the classification of data.
- 27 Explain the difference between histogram and bar diagram. Briefly describe their uses.
- 28 Explain cyber security and privacy issues.
- 29 Write notes on internet and mobile phones.
- 30 Explain IT in resource management.

(5 × 6 = 30 marks)

### Part D

IV. Essay Questions. Answer any *two* questions. Each carries 10 marks :

- 31 What is an experiment ? How will you design an experiment ? What are the principles and procedures involved in experimentation ?
- 32 What is a data ? How will you process statistical data ?
- 33 Write an account on the health issues guide-lines for proper usage of computers, internet and mobile phones.
- 34 Explain futuristic Information Technology Artificial Intelligence.

(2 × 10 = 20 marks)