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**SUBJECT CODE NO: - FF-6652**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**M.Sc. (Sem-II) (Zoology)**  
**Examination January-2023**

**Instrumentation and Biological Techniques and Scientific Writing-ZOO-204 &-ZOO-205**

[Time: 3:00 Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

- N. B
- 1) Part 'A' is compulsory.
  - 2) Attempt any five questions from part 'B'
  - 3) Draw neat diagram wherever necessary

Part- A

Q1

20

Multiple choice question (Each question carry 2 marks)

- 1- Bouin's fluid is yellow because of the presence of-
  - a. Chloroform
  - b. Picric acid
  - c. Formaldehyde
  - d. Iodine
- 2- Classical PH meter in chemical or clinical laboratory is made with a glass electrode that is selectively sensitive to \_\_\_\_\_.
  - a. Na<sup>+</sup>
  - b. K<sup>+</sup>
  - c. H<sup>+</sup>
  - d. OH<sup>-</sup>
- 3- Which of the following is used as detector crystal in ESR spectrometer
  - a. Silicon tungsten rectifier
  - b. Silicon rectifier
  - c. Silicon boron rectifier
  - d. Silicon quartz rectifier
- 4- Polyacrylamide gel electrophoresis (PAGE) is used for \_\_\_\_\_ analysis.
  - a. Protein only
  - b. Nucleic acid only
  - c. Protein and Nucleic acid
  - d. None of these
- 5- \_\_\_\_\_ is an important pre requisite for aspiring writers.
  - a. Speaking
  - b. Talking
  - c. Reading
  - d. Assessment
- 6- Which of the following is necessary component in scientific writing
  - a. Nature of study
  - b. Aims
  - c. Sources of information
  - d. Scope of the study
- 7- The act of presenting someone else's work or idea as own is considered as-
  - a. Academic dishonesty
  - b. Plagiarism
  - c. Wrongful appropriation
  - d. All of these

- 8- Which of the following thing should be avoided while writing a conclusion
- Ignoring the negative results
  - Providing unclear summary
  - Summarise his research
  - Aspects of future research
- 9- Which of the following is not true about high pressure liquid chromatography?
- It requires high pressure for absorption and separation
  - It is performed in columns
  - It has high sensitivity
  - The is no need to vaporise the sample
- 10- Scientific writing is a serious and \_\_\_\_\_ way of writing.
- Formal
  - Informal
  - Easy
  - difficult

### Part B

(Attempt any five)

- Q2 Describe principle of polyacrylamide gel electrophoresis with its applications. **12**
- Q3 Explain role of English language in scientific writing **12**
- Q4 Write in detail specimen preparation for scanning electron microscopy **12**
- Q5 Describe the standard structure of scientific paper **12**
- Q6 What is the principle of P<sup>H</sup> meter! Explain its working and applications. **12**
- Q7 Give an account of 'scientific writing in computer age' **12**
- Q8 Write notes on- (any two) **12**
- Principle of gas chromatography
  - Theory of fixation
  - Copyright and authorship
  - Types of visual aids