

G-1/146/21

Roll No.....

M.Sc. I Semester Examination, April-2021

ZOOLOGY

Paper IV

(Methods and Techniques in Zoology)

Time : 3 Hours]

[Maximum Marks : 80

Note : All questions are compulsory. Question Paper comprises of 3 sections. **Section A** is objective type/Multiple Choice questions with no internal choice. **Section B** is short answer type with internal choice. **Section C** is long answer type with internal choice.

SECTION 'A'

(Objective Type Questions)

Fill in the blanks :

1 × 8 = 8

1. Colorimeter work at the range ofwavelength.
2. pH meter is based onequation.
3. Resolution power formula of electron microscope is
4. Oil immersion objective lense has an NA value of
5. The no. of protons or atoms number is reduced to 2, the type of radioactive decay is
6. When two atomic nuclei combine it is called
7. Name of scientist who developed electrophoresis.....
8. Speed of migration of ions in electric field depends on andof molecule.

SECTION 'B'

6 × 4 = 24

(Short Answer Type Questions)

Note : Answer the following questions in 250 words.

1. Write down the general rules of lab safety.

P.T.O.

[2]

Or

Describe the structure of combination electrode.

2. Compare compound microscope and electron microscope.

Or

Structure and role of magnetic coils in electron microscope.

3. Describe the biological application of Autoradiography.

Or

What is Geiger Muller Counter.

4. Write principle of centrifuge.

Or

Write factors affecting electrophoresis.

SECTION 'C'

12 × 4 = 48

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

1. What are BSL I, II, III and IV lab. Describe the safety manuals of all the four.

Or

Describe principle and parts of instrument of UV spectrophotometer.

2. Write principle and working of fluorescent microscopy.

Or

Describe scanning electron microscope.

3. What is radioactive decay. Describe types of radioactive decay.

[3]

Or

What is magnetic resonance Imaging ? Write its application.

4. Describe following types of gel chromatography :

(a) Ion exchange chromatography,

(b) Adsorption chromatography.

Or

Describe the following :

(a) Isoelectric focusing,

(b) Types of gel used in gel electrophoresis and their use.

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