

Code No. : B02/305

Second Semester Online Examination, May-June, 2022

M. Sc. ZOOLOGY**Paper III****TOOLS AND TECHNIQUES IN BIOLOGY**

Time : Three Hours] [Maximum Marks : 80

Note : Part A and B of each question in each unit consist of 'very short answer type question' which are to be answered in one or two sentences. Part C 'Short answer type' and D 'Long answer type' of each question should be answered within the word limit mentioned.

UNIT-I

1. (A) What is calomel ? 2
 (B) Give the definition of centrifugal force. 2
 (C) What is the principle of colorimeter ? 4

*(word limit 200-250)***OR**

Make a diagrammatic presentation of septrophotometer.

- (D) Write the working of centrifugal machine.

*(word limit 400-450) 12***P.T.O.****OR**

How to measure the weight from single Pan Balance ?

UNIT-II

2. (A) How do you calculate the Magnification power of light microscope ? 2
 (B) Write the name of device which produce electron in electron microscope. 2
 (C) Write the advantages and limitation of fluorescence microscope.

*(word limit 200-250) 4***OR**

How do you calculate the resolution power of simple light microscope ?

- (D) Write the principle and construction of SEM. *(word limit 400-450) 12*

OR

Write the antigen concentration method through RIA.

UNIT-III

3. (A) Write the formula of *r_f* value. 2

[2]

(B) What is the role of comb plate in gel electrophoresis ? 2

(C) What is fluidics system in flow cytometry ? (word limit 200-250) 4

OR

Write the uses of density gradient centrifugation.

(D) Write the process of paper chromatography technique. (word limit 400-450) 12

OR

How we prepare a gel slab in gel electrophoresis.

UNIT-IV

4. (A) What is media ? 2

(B) Write the name of chemical which is used in cryopreservation technique. 2

(C) Write the composition of animal cell culture media. (word limit 200-250) 4

OR

Give the description of any one physical sterilization technique.

(D) Explain in detail how laminar flow works.

(word limit 400-450) 12

OR

How do you prepare a gel slab in gel electrophoresis ?

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