

F-3121

Sub. Code

7PZO1C1

M.Phil. DEGREE EXAMINATION, NOVEMBER 2019

First Semester

Zoology

RESEARCH METHODOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 5 = 25)

Answer any **five** questions.

1. Write briefly on H-index. How it is arrived?
2. Give detail about literature collection.
3. List out briefly on good laboratory practices.
4. Write the working principle and applications of centrifuge.
5. Explain the principle of image formation in phase contrast microscope.
6. Write note on various stains used in histology and their specific usage.
7. Give detail about ELISA technique.
8. Explain the advantages and disadvantages of sampling and census methods.

Part B

(5 × 10 = 50)

Answer **all** questions choosing either (a) or (b).

9. (a) Describe how a research paper is prepared to publish in a scientific journal.

Or

- (b) Give an account of slide preparation and data presentation in a conference.

10. (a) Elaborate the working principle and mechanism of colorimeter.

Or

- (b) Give a detailed account of any one chromatography technique.

11. (a) Elaborate the parts and mechanism of transmission electron microscope.

Or

- (b) Write an essay on confocal microscope.

12. (a) Describe animal cell culture techniques.

Or

- (b) Write in detail about PCR technique.

13. (a) Calculate the standard deviation and standard error of the following data. Weight of the students (kg): 50, 48, 47, 50, 44, 53, 52, 49, 51, 46.

Or

- (b) Find out the correlation coefficient of the following data.

Age of the fish in days (X) : 5 10 15 20 25 30 35

Weight in grams (Y) : 3 7 12 15 20 25 30

F-3122

Sub. Code

7PZO1C2

M.Phil. DEGREE EXAMINATION, NOVEMBER 2019

First Semester

Zoology

ADVANCED ZOOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(5 × 5 = 25)

Answer any **FIVE** questions.

1. Describe the life cycle of malaria parasite.
2. Comment on culture of groupers and sea bass.
3. Write short notes on Hardy-Weinberg equilibrium.
4. With a neat diagram describe the structure of a neuron.
5. List the causes and effect of acid rain.
6. Give a brief account on glycolysis.
7. Explain monohybrid inheritance with suitable example.
8. Write about culture of lac insect.

Part B

(5 × 10 = 50)

Answer **all** questions, choosing either (a) or (b).

9. (a) Describe the life cycle of *Fasciola hepatica* add notes on its parasitic adaptations.

Or

- (b) Write the pathology, diagnosis and treatment of *Entamoeba histolytica*.

10. (a) Describe the culture method of shrimps.

Or

(b) Write an essay on Integrated Pest Management.

11. (a) Give a detailed account of the different stages involved in the cell cycle.

Or

(b) Write in detail about polygenic inheritance with suitable examples.

12. (a) Give a detailed account on post translational modifications of proteins.

Or

(b) With a neat diagram explain the digestive system of human.

13. (a) Write an essay on land pollution.

Or

(b) Give a detail account on bioremediation.
