

M.Sc. 3rd Semester Examination, 2024

ZOOLOGY

(Special Paper : Fishery)

(Practical)

PAPER – ZOO-396 A

Full Marks : 50

Time : 5 hours

Answer all questions

The figures in the right hand margin indicate marks

1. Demonstrate the urinogenital system of a catfish (or a fish) in your Laboratory with a suitable diagramme. 5 + 3
2. Dissect out the pituitary gland of a fish and display the gland properly (*in vitro*) OR ARO of a catfish. 5

(Turn Over)

3. Identify the following species with reasons
(Only the Genus characters) 2 × 5
- (a)
- (b)
- (c)
- (d)
- (e)
4. Identify the fish blood parasite from a temporary stain preparation and comments on your answer. 5 + 2
5. Morphometrically characterise the fish species with a suitable diagram and justify your answer with reasons. 5 + 5
6. Laboratory Note Book. 5
7. Viva-voce. 5
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M.Sc. 3rd Semester Examination, 2024

ZOOLOGY

(Ecology Special Practical-I)

(Practical)

PAPER – ZOO-396 B

Full Marks : 50

Time : 5 hours

Answer all questions

The figures in the right hand margin indicate marks

1. Identify the following aquatic biota with their distinguishing characters and ecological importance : 4 × 3
a. b. c. d.
2. Write down the principle and protocol of estimating _____ (total alkalinity/hardness/ Salinity) of given sample water. Perform the experiment and comment on your result.
2 + 3 + 3 + 2

(Turn Over)

3. Record the coordinates of a location using GPS instrument. What are the different satellite signals displaying in the device? Draw the labelled diagram of the device model Garmin etrex. 3 + 2 + 3

Or

Prepare a climograph with the given data/ and comment on the climate of the region. 5 + 3

| Month | Temp (°C) | Relative humidity (%) | Rainfall (mm) |
|-------|--------------|--------------------------|------------------|
| Jan | 18 | 76 | 2.3 |
| Feb | 20 | 74 | 1.8 |
| Mar | 32 | 77 | 3.8 |
| Apr | 34 | 78 | 0.0 |
| May | 36 | 79 | 0.0 |
| Jun | 32 | 83 | 36.0 |
| Jul | 34 | 86 | 64.0 |
| Aug | 33 | 85 | 34.0 |
| Sep | 32 | 88 | 11.6 |
| Oct | 30 | 89 | 3.0 |
| Nov | 28 | 86 | 0.0 |
| Dec | 24 | 76 | 0.0 |

(3)

| | |
|-------------------------|----|
| 4. Field report. | 10 |
| 5. Laboratory NoteBook. | 5 |
| 6. Viva-voce. | 5 |



Total Pages—2

PG/IIIS/ZOO/396 C/24(Pr.)

M.Sc. 3rd Semester Examination, 2024

ZOOLOGY

(Special Paper : Genetics and Molecular Biology)

(Practical)

PAPER – ZOO-396 C

Full Marks : 50

Time : 5 hours

Answer all questions

The figures in the right hand margin indicate marks

1. Isolate plasmid DNA from the sample provided. Prepare an agarose gel and run DNA through electrophoresis. Write the procedure and comment on your observation. 6 + 6 + 3

(Turn Over)

(2)

2. Prepare a metaphase chromosome from rat bone marrow. Display chromosome under microscope. Draw your finding and write the procedure. 10 + 2 + 3
 3. Submission of Laboratory note book. 5
 4. Submission of field visit report (Institute). 10
 5. Viva-voce. 5
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Total Pages—2

PG/IIIS/ZOO/396 D/24(Pr.)

M.Sc. 3rd Semester Examination, 2024

ZOOLOGY

(Special Paper : Parasitology)

(Practical)

PAPER – ZOO-396 D

Full Marks : 50

Time : 5 hours

Answer all questions

The figures in the right hand margin indicate marks

1. Make a stained preparation of the sample provided. Write the procedure in brief.
Comment on your observation. 8 + 3 + 3

(Turn Over)

(2)

2. Identify the specimen (A, B, C, D) with reasons.
Mention phylum, class and order of each
specimen with two characters. 4 × 4

 3. Submission of Report on Research Institute/
Laboratory visit. 10

 4. Laboratory Note Book. 5

 5. Viva-voce. 5
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