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Printed Pages : 3

(21223)

Roll No. .....

M.Sc.III Sem.

13075

M.Sc. Examination, December-2023

ZOOLOGY-IX

Chordata

(H-3062)

Time : Three Hours] *[Maximum Marks : 50*

Note : Attempt questions from **all** sections as per instructions.

Section–A

(Very Short Answer Type Questions)

Note : Attempt all **five** questions, each question carries 2 marks (Answer in 75 words). 5×2=10

1. Define Neoteny and Paedogenesis.
2. Discuss special characters of Class Aves.
3. Special Features and Affinities of Order Monotremata.
4. Give 5 characters of Protochordata

5. Classify the following animals up to order:

   (a) Hemidactylus

   (B) Panthera Tigris

Section–B

(Short Answer Type Questions)

Note : Attempt any **two** questions. Each question carries five marks. (Answer in 200 words). 2×5=10

6. Explain Migration in Birds.

7. Write short note on Flightless Birds.

8. Describe the types of Caudal Fins in Fish.

Section–C

(Long Answer Type Questions)

Note : Attempt any **three** questions. Each question carries 10 marks. (Answer in Detail) 3×10=30

9. What is Adaptation? Describe how a bird is adapted to its aerial mode of life.

10. Discuss different types of dinosaurs and their peculiarities. What was the cause of their Extinction.

11. Discuss Parental care in Amphibia with suitable examples.

12. What is Urino Genital system? Give a comparative account on vertebrate kidneys with suitable diagrams.

13. Discuss in detail the General and Special characters of class Mammalia.

28.

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Printed Pages : 2

(21223)

Roll No. 22202220003

M.Sc. -III Sem.

13076

M.Sc. Examination, December -2023

ZOOLOGY

Development Biology

(H-3063)

Time : Three hours] *[Maximum Marks : 50*

Note: Attempt questions from **all** the sections as per instructions. Draw a suitable diagram where needed.

Section-A

(Very Short Answer Type Questions)

Note: Attempt all the **five** questions. Each question carries 2 marks. Very short answer is required.

5×2=10

1. Ring Centriole -
2. Oncogenesis -
3. Mosaic theory -
4. Invagination -
5. Ecdysone -

Section-B

(Short Answer Type Questions)

Note: Attempt any **two** questions out of the following three questions. Each question carries 5 marks. Short answer is required. 2×5=10

6. Chemical changes during cleavage?

7. Explain morphollaxis?

8. Explain spermatogenesis?

Section-C

(Detailed Answer Type Questions)

Note: Attempt any **three** questions out of the following four questions. Each question carries 10 marks. Answer is required in detail. 3×10=30

9. What is gastrulation? Describe the different morphogenetic movements which occur during gastrulation?

10. What is Regeneration? Explain the mechanism of regeneration in different animals?

11. Write a detailed essay on Metamorphosis in insects and Amphibians?

12. Write all the theories of Ageing?

D Printed Pages : 3

(21223) Roll No. 03

M.Sc.–III Sem.

13077

M.Sc. Examination, Dec.–2023

ZOOLOGY

Environmental Biology

(H-3064)

Time : 3 Hours] *[Maximum Marks : 50*

Note: Attempt questions from **all** Sections as per instructions.

Section–A

(Very Short Answer Type Questions)

Note : Attempt all ***five*** questions. Each question carries 2 marks. Very short answer is required not exceeding 75 words. 5×2=10

1. What is Gamma Diversity.
2. Define Thermotaxis
3. Explain Pollination.
4. Define Retrogressive succession.
5. Write on Nilgiri Biosphere reserve.

Section–B

(Short Answer Type Questions)

Note: Attempt any ***two*** question out of the following three questions. Each question carries 5 marks. Short answer is required not exceeding 200 words. $5 \times 2 = 10$

6. Define Ecological succession.

7. Explain why herbivores are also called as first order Consumer.

8. What do you mean by 'Species Diversity"

Section–C

(Descriptive Answer Type Questions)

Note: Attempt any ***three*** questions out of the following five questions. Each question carries 10 marks. Answer is required in detail. $3 \times 10 = 30$

9. Define "Environment". Give an account of different elements of environment.

10. Give an accounts of Density Dependent' and 'Density Independent Regulation" of population.

11. Define ecosystem. Describe aquatic ecosystem with special reference to energy flow.

12. What is Air pollution and what are the main causes of Air Pollution. How can we succeed in the prevention of Air Pollution?

13. Give a detailed account on Principles and Management of Conservation of Natural Resources.

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(21223)

M.Sc.–III Sem.

Printed Pages : 2

Roll No. .....05.....

13078

M.Sc. Examination, Dec.–2023

ZOOLOGY

(Animal Behaviour)

(H-3065)

Time : 3 Hours] *[Maximum Marks : 50*

Note: Attempt **all** the sections as per instructions.

Section–A

(Very Short Answer Questions)

Note : Attempt all ***five*** questions. Each question carries 2 marks. Very short answer is required not exceeding 75 words. 2×5=10

1. Write short notes on the following:

   (i) Olfactory and auditory Environmental perceptions. 2

   (ii) Navigation 2

   (iii) Conflict behaviour 2

   (iv) Domestication 2

   (v) Memory in animals. 2

Section–B

(Short Answer Questions)

Note: Attempt any ***two*** questions out of the following three questions. Each question carries 5 marks. Short answer not exceeding 200 words. 5 ×2=10

2. What do you mean by 'Kinesis', give its types with examples. 5

3. Explain biological clocks. 5

4. Explain briefly 'communication'. 5

Section–C

(Detailed Answer Questions)

Note: Attempt any ***three*** questions out of the following five questions. Each question carries 10 marks. Answer is required in detail. 3 ×10=30

5. Define 'Learning'. Explain its forms and mechanisms of Learning. 10

6. What do you mean by the social organisation and explain it in primates. 10

7. Describe different parts of brain in human beings with their role in different animal behaviour. 10

8. Describe 'Pheromones' in detail. 10

9. Describe migration in birds. 10