



K24U 0753

Reg. No. :

Name :

IV Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/
Improvement) Examination, April 2024
(2019 to 2022 Admissions)
CORE COURSE IN ZOOLOGY
4B 04 ZLG : Chordata II and Comparative Anatomy

Time : 3 Hours

Max. Marks : 40

Instruction : Give illustrations and figures **wherever** necessary.

- I. Essay questions. Answer **any two**. **Each** question carries **8** marks.
- 1) Describe the adaptations of aquatic mammals.
 - 2) Describe the structure and functioning of heart of *Oryctolagus*.
 - 3) Differentiate Protheria, Metatheria and Eutheria.
 - 4) Elucidate the significance of migratory behaviour of birds, focussing on the types of migration. **(2×8=16)**
- II. Short essays. Answer **any two**. **Each** question carries **4** marks.
- 5) Compare aortic arches in amphibians and mammals.
 - 6) Elucidate how birds are adapted for aerial mode of life.
 - 7) Briefly explain the salient features of Superorder Palaeognathae, citing two examples. **(2×4=8)**
- III. Short answer questions. Answer **any six**. **Each** question carries **2** marks.
- 8) Differentiate procoelous, amphicoelous and heterocoelous vertebrae.
 - 9) What are the salient features of Order Insectivora ? Cite an example.
 - 10) Comment on the distinctive feature of Jerdon's courser.
 - 11) How chiropterans are adapted for flight ?

P.T.O.



12) What is dental formula ? Cite one example.

13) How does birds orient while migrating ?

14) Where is pecten found and what are its functions ?

15) What are the features of baleen whales ?

(6×2=12)

IV. Multiple choice questions. Answer **all**. **Each** question carries **0.5** marks.

16) Pigeons are

- a) Ureotelic b) Uricotelic c) Ammonotelic d) Aminotelic

17) *Pavo cristatus* belongs to order

- a) Galliformes b) Columbiformes
c) Cuculiformes d) Piciformes

18) The first pair of cranial nerves in birds and mammals is

- a) Optic b) Olfactory c) Oculomotor d) Auditory

19) Cutaneous gland seen at the base of tail of birds is

- a) Sebaceous gland b) Green gland
c) Preen gland d) Sudoriferous gland

20) Scientific name of red kangaroo

- a) *Axis axis* b) *Sus scrofa*
c) *Funambulus palmarum* d) *Macropus rufus*

21) Which of the following animals belong to Order Carnivora ?

- a) Manis b) Physter c) Panthera leo d) Ratufa

22) Locomotion in rabbit is

- a) Digitigrade b) Plantigrade c) Unguligrade d) Saltatorial

23) Typical jaw suspension in mammals is

- a) craniostylic b) autostylic
c) amphistylic d) hyostylic

(8×0.5=4)



K23U 1149

Reg. No. :

Name :

**IV Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, April 2023
(2019 Admission Onwards)
CORE COURSE IN ZOOLOGY
4B 04 ZLG : Chordata – II and Comparative Anatomy**

Time : 3 Hours

Max. Marks : 40

Instruction : Give illustrations and figures *wherever* necessary.

I. Essay questions (**Each** question carries **8** marks). Answer **any two** :

1. Write an essay on flight adaptations in birds.
2. Explain the structure and working of heart in rabbit.
3. Write an account on the dentition in mammals.
4. Give a comparative account on the aortic arches in all the five classes of vertebrates. **(2×8=16)**

II. Short essay (**Each** question carries **4** marks). Answer **any two**.

5. Give a brief account on any four types of vertebrae based on the shape of centrum.
6. Explain the evolutionary significance of Archaeopteryx.
7. List the adaptations of Chiroptera for an aerial life. **(2×4=8)**

III. Short answer questions. (**Each** question carries **2** marks). Answer **any six**.

8. Write about a bird, which was once thought extinct, but later rediscovered.
9. Define double circulation. Give example.
10. Cud chewing mammals.
11. Write on diaphragm.
12. What is retia mirabilia ?
13. Name the glands of eye in a rabbit.
14. Cristae and maculae
15. Symsacrum. **(6×2=12)**

P.T.O.



IV. Multiple choice questions. (**Each** question carries **0.5** marks). Answer **all**.

16. Wish bone or Merry thought is the other name for _____
(Synsacrum, Furcula, pygidium, pygostyle)
17. _____ is the pace maker of mammalian heart.
(SA node, AV node, Purkinje fiber, Bundle of His)
18. _____ is a flightless bird.
(Struthio, stork, spoon bill, ibis)
19. _____ is our national aquatic animal.
(Dolphin, Whale, Dugong, Porpoise)
20. _____ is the part of the ear functioning in hearing.
(utricle, semi circular canals, sacculus, cochlea)
21. Which one belongs to Artiodactyla ?
(zebra, pig, tapir, rhinoceros)
22. _____ aortic arch and _____ oviduct are absent in birds.
(left and left, left and right, right and right, right and left)
23. Tusks of elephants are modified _____
(incisors, canines, premolars, molars)

(8×0.5=4)



K22U 1584

Reg. No. :

Name :

**IV Semester B.Sc. Degree CBCSS (OBE) Regular/Supplementary/
Improvement Examination, April 2022**

(2019 Admission Onwards)

CORE COURSE IN ZOOLOGY

4B 04 ZLG : Chordata – II and Comparative Anatomy

Time : 3 Hours

Max. Marks : 40

Instruction : Give illustrations and figures **wherever** necessary.

I. Essay questions (**Each** question carries **8** marks). Answer **any two**.

- 1) Write an essay on Flight adaptations in birds.
- 2) Write an essay on jaw suspension in vertebrates.
- 3) Write an essay on the dentition in mammals.
- 4) Describe the digestive system of rabbit. **(2×8=16)**

II. Short Essay (**Each** question carries **4** marks). Answer **any two**.

- 5) Mention the reptilian and mammalian characters of Prototheria.
- 6) Describe the various types of feathers found in pigeon.
- 7) Explain the adaptations in aquatic mammals. **(2×4=8)**

III. Short answer questions (**Each** question carries **2** marks). Answer **any six**.

- 8) Write a note on extinct bird dodo.
- 9) Write a note on Order Primates.
- 10) Describe the structure of heterocoelus vertebrae.
- 11) Distinguish between Indian elephant and African elephant.
- 12) Sketch and label the brain of rabbit.
- 13) Comment on macropus.
- 14) Comment on the features of Neornithes.
- 15) Write a note on Kiwi. **(6×2=12)**

P.T.O.

IV. Multiple choice questions (**Each** question carries **0.5** marks). Answer **all**.

- 16) In birds the posterior caudal vertebrae are fused to form
a) Plumage b) Synsacrum c) Furcula d) Pygostyle
- 17) Pouched mammals belong to
a) Prototheria b) Metatheria c) Ornithodelphia d) Eutheria
- 18) Odd toed ungulates such as horse, zebra, donkey etc. are included under order
a) Proboscida b) Ruminants c) Perissodactyla d) Artiodactyla
- 19) Which of the following mammals is a Marsupial ?
a) Macropus b) Manis c) Macaca d) Dugong
- 20) _____ is a perching bird.
a) Mylvus b) Passer domesticus
c) Dinopium d) Alcedo
- 21) The feathers that cover the newly hatched birds
a) Contour feathers b) Filoplumes
c) Down feathers d) Remiges
- 22) The functional kidney of bird is
a) Pronephros b) Mesonephros
c) Opisthonephros d) Metanephros
- 23) *Ornithorhynchus anatinus* is another name for
a) Duck-billed Platypus b) Opposum
c) Echidna d) Kangaroo

(8×0.5=4)



K21U 1148

Reg. No. :

Name :

**IV Semester B.Sc. Degree CBCSS (OBE) Regular
Examination, April 2021
(2019 Admission Only)
CORE COURSE IN ZOOLOGY
4B 04 ZLG Chordata II and Comparative Anatomy**

Time : 3 Hours

Max. Marks : 40

Instruction : Give illustrations and figures **wherever** necessary.

- I. Essay Questions (**Each** question carries **8** marks) – Answer **any two** :
- 1) Write an essay on migration in birds.
 - 2) Describe the respiratory system of pigeon.
 - 3) Describe the aortic arches in different groups of vertebrates.
 - 4) Describe the dentition in mammals. (2×8=16)
- II. Short Essay (**Each** question carries **4** marks) – Answer **any two** :
- 5) Differentiate between Archaeornithes and neornithes. Site examples.
 - 6) Describe the digestive system of rabbit.
 - 7) Write down the aquatic adaptations in mammals. (2×4=8)
- III. Short answer questions (**Each** Question carries **2** marks) – Answer **any six** :
- 8) Comment on Dodo.
 - 9) Write a note on Order Chiroptera.
 - 10) Write a note on Hyostylic jaw suspension.
 - 11) Distinguish between Indian elephant and African elephant.
 - 12) What is an amphicoelus vertebra ?
 - 13) Comment on Macropus.
 - 14) Differentiate between Rectrices and Remiges.
 - 15) Comment on Struthio. (6×2=12)

P.T.O.

IV. Multiple choice Questions (**Each** Question carries **0.5** marks) – Answer **all**.

- 16) Which one is a flightless bird ?
a) Apteryx b) Mylvus c) Ardea d) Eudynamys
- 17) Which of the following bones form the wishbone of birds ?
a) Hind limbs b) Clavicles c) Skull d) Pelvic girdle
- 18) Flight muscles of birds are attached to
a) Keel of sternum b) Pelvic girdle c) Clavicles d) Humerus
- 19) The scientific name of peacock is
a) *Pavo cristatus* b) *Gallus gallus*
c) *Columbia livia* d) None of these
- 20) Placental mammals are included in
a) Ornithodelphia b) Eutheria c) Metatheria d) Prototheria
- 21) Tusk of elephant is
a) Canine b) Molars c) Incisors d) Premolars
- 22) In which order human is placed ?
a) Carnivora b) Rodentia c) Primates d) Lagomorpha
- 23) Posterior caudal vertebrae of birds are fused to form
a) Plumage b) Synsacrum c) Pygidium d) Pygostyle

(8×0.5=4)