



Final term Exam
May 2023



Department: Zoology	Major: ثمانية حيوان و كيمياء	Course Title: مقدمة في الحبلات والتطور العضوي
Code number: 223z	Mark: 90	Date: 21 / 6 / 2023
Time: 2 Hours		الإمتحان في صفحتين

Answer the Following Questions:

Question One: (42 Marks)

a-Compare between (18 marks)

- 1-Petromyzontiformes-Myxiniiformes
- 2-Archaeornithes-Neornithes
- 3-Monotremes - Metatheria

b-Define (8 marks)

Dorsals-sacrum-synsacrum-plastron

c-Discuss four characteristics of birds that facilitate flight. (8 marks)

d-Explain with a complete labeled drawing the nervous system of cephalochordates (8 marks)

Question Two: (10 Marks)

a-Match between (A) and (b)

A	B
1- amphibia	a) air bladder
2- aves	b) cartilagenous notochord
3- gymnophiona	c) mammary gland
4- cyclostomata	d) ostracodermi and cyclostomata
5- ratites	e) the only true flying mammals
6 - mammals	f) limbless amphibia
7- lacertilia	g) flightless
8 - chiroptera	h) visible ear openings
9- cephalospidomorphi	i) sucking and circular mouth without jaws
10- chondrichthyes	j) dual habitat

Question Three: (20 Marks)

Write true or false and correct the false ones

1. There are 10 pairs of cranial nerves in amniota.
2. Squamata include lizards and snakes.
3. In aves, there is only one aortic arch which is the right one.
4. Ducks belong to order Strigiformes.
5. Operculum is an advancement seen in class Osteichthyes.
6. An example of a monotreme is Kangaroos.
7. The notochord is restricted to the tail region in hemichordata.
8. cephalochordata, hemichordate and urochordata are Protochordata.
9. The wings of an insect and the wings of a bat are homologous structures.
10. Systematics is the study of the diversity of organisms using information from cellular to population level.

Question Four: (18 Marks)

Choose the correct answer for each of the following

1. Atypical feature of both cartilaginous and bony fishes

- a. lateral line b. spiral valve c. ctenoid scale d. swim bladder

2. centrum of anurans and present day reptile is of the type

- a. Ampicelous b. acelous c. procelous d. heterocelous

3. In which vertebrates is fertilization exclusively internal?

- a. Chondrichthyes, Osteichthyes, and Mammalia
b. Amphibia, Mammalia, and Aves
c. Chondrichthyes, Osteichthyes, and Reptilia
d. Reptilia, Aves, and Mammalia

4- Pharyngeal gill slits appear to have functioned first as:

- a. the opening to the digestive system or mouth.
b. suspension-feeding devices.
c. components of the jaw.
d. gill slits for respiration.

5. Read the given statements and select the correct option

Statement 1. cephalochordates bears notochord all along the body throughout life.

Statement 2. Urochordates bears vertebral column only in the tail region throughout the life

- a. Both statements 1 and 2 are correct
b. Statement 1 is correct and statement 2 is incorrect
c. Statement 1 is incorrect and statement 2 is correct
d. Both statements are correct

6. in some chordates, the notochord is modified as the vertebral column. Such animals are called vertbrates. Which one of the following statements is correct

- a. all chordates are vertebrates but all vertebrates are not chordates.
b. all vertebrates are chordates and all chordates are vertebrates
c. all vertbrates are chordates but all chordates are not vertebrates
d. chordates are not vertebrates and vertebrates are not chordates

7. Centrum, pre and postzygapophysis, transverse processes are parts of

- a. skull of frog
b. vertebrae of frog
c. sternum of frog
d. pectoral girdle of frog

8. Which of the following are anamniotes?

- a. Chondrichthyes, Osteichthyes, Amphibia
b. Reptilia, Aves, Amphibia
c. Amphibia, Aves, Mammals
d. Reptilia, Mammals, Aves

9. Which of the following is the smallest taxonomic group of animals having a cranium, vertebral column, ventral heart, pulmonary respiration and two pairs of limbs?

- a. Gnathostomata
b. Tetrapoda
c. Vertebrata
d. Chordata

"End Exam"

With Best Wishes

Prof. Dr. Neveen El Bakry

Prof. Dr. Kady El Bakry

Prof. Dr. Ayman hyder

Head of Department Prof. Ola A. Abu Samak