



Assiut University
Faculty of Science
Zoology Department

Course name: Vertebrate 2

Course code: (330-Z)

Time: 2 hours

21-12-2017



Answer the four following questions

Question 1: (20 pt)

Choose the single response that is the correct answer of the following.

1. Amniotic vertebrates include
 - a) All terrestrial classes
 - b) Only class: Reptilia
 - c) Reptilia, Aves and Mammals
 - d) Lizard and Birds
2. The peak of Reptilian radiation in
 - a) Jurassic
 - b) Mesozoic
 - c) Carboniferous
 - d) Triassic
3. Head of Amniotic vertebrate is carried of the ground by
 - a) The skull
 - b) Tetrapod limb
 - c) Trunk region
 - d) Developed neck
4. The Atlas vertebra of amniote posses
 - a) Developed centrum
 - b) Prezygapophysis and Postzygapophysis
 - c) Postzygapophysis and lack centrum
 - d) Developed centrum and Prezygapophysis

5. Water retention for Reptiles have been done by

- a) Intestine
- b) Cloaca
- c) Coprodaeum
- d) Urodaeum

6. Reptiles breath by

- a) Positive pressure pumping
- b) Aspiration
- c) Air sacs pumping
- d) Passive pressure

7. Accessory cranial nerves in Amniotes are

- a) Optic and spinal accessory
- b) Trigeminal and hypoglossal
- c) Spinal accessory and hypoglossal
- d) Hypoglossal and olfactory

8. Sinus venosus exist in

- a) Reptilian heart
- b) Amphibian heart
- c) Reptilian and Amphibian heart
- d) All terrestrial vertebrates

9. Skull with upper temporal fossa is

- a) Synapsidian
- b) Parapsidian
- c) Diapsidian
- d) Anapsidian

10. Diaphragm exist in

- a) All Reptiles and Amphibians
- b) Crocodiles and Birds
- c) Mammals and Crocodiles

11. Snakes swallow big prey because

- a) Its big mouth
- b) Its monimostylic skull
- c) Have strong tongue
- d) Its streptostylic skull

12. Bird derived from

- a) Archosauria
- b) Archaeopteryx
- c) Salposcutus

13. Left systemic arch disappears in

- a) Birds and Mammals
- b) Amphibia and Reptilia
- c) Reptiles only
- d) Birds only

14. Fusion of sacral vertebrae with pelvic girdle occurs in

- a) Amphibia
- b) Reptilia
- c) Birds
- d) Mammals

15. Air sac system has inhalant sacs which are

- a) All sacs
- b) The anterior and posterior thoracic sacs
- c) The interclavicular, anterior and posterior thoracic sacs
- d) The cervical, interclavicular and anterior thoracic sacs

16. Air frequency transmit in mammals by the

- a) Outer ear
- b) Middle ear
- c) Inner ear

17. Which of the following is not found in birds

- a) Feather
- b) Uropygial
- c) Developed pectoral muscles
- d) Multiple skin glands

18. The communication of the embryo with mothers in marsupialia is through

- a) Placenta like the higher mammals
- b) Embryonic membranes
- c) Chorioallantoic or amphaloidean placenta
- d) Amnion

19. Birds feed their young by milk within order

- a) Passeriformes
- b) Columbiformes
- c) Falconiformes
- d) Charadriiformes

20. Mammals derived from

- a) Anapsidian reptiles
- b) Synapsidian reptiles
- c) Diapsidian reptiles
- d) Parapsidian reptiles

Question 2:

(5 pt)

- **List only, no commentary needed**

1. Characters of flightless birds; a-..... b-
..... c-.....
2. Muscle emerge....., while bone represent.....

3. Characters define a mammal.....
.....
.....
4. Lizards have.....lung.
5. Mammal has.....cervical vertebrae.

Question3: (15 pt.)

- Describe three items only of the following(Full description and clear drawing)
- a) The amniotic membranes
 - b) The avian brain
 - c) The human heart
 - d) The reptilian arterial system

Question4: (10pt.)

- What is a neuromast organ (Macula) and Crista? (Full description, structure, location and clear drawing)

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