

B.Sc. ZOOLOGY
FOURTH SEMESTER (SPECIAL REPEAT)
COMPARATIVE ANATOMY OF VERTEBRATES
BSZ-401

SET
A

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

1. Smallest arteries are connected to smallest veins by:
a. Capillaries
b. Arterioles
c. Venules
d. Muscles
2. In Urodeles conus is replaced by:
a. Aorta
b. Vena cava
c. Foramen ovale
d. Bulbus arteriosus
3. The opening of coronary sinus is guarded by:
a. Mitral valve
b. Tricuspid valve
c. Semilunar valve
d. Besian valve
4. Hypothetical primitive kidney is:
a. Archinephros
b. Pronephros
c. Metanephros
d. Nephron
5. Wolffian body is:
a. Archinephros
b. Pronephros
c. Metanephros
d. Metanephros
6. Cerebral hemispheres in eutherians are connected internally by:
a. Corpus albicans
b. Corpus callosum
c. Corpus luteum
d. Aqueduct of Sylvius
7. A mass of cell bodies within the within the gray matter of brain or spinal cord is:
a. Neuroglia
b. Ganglion
c. Nucleus
d. Cyton
8. Which of the following is a visual receptor?
a. Proprioceptor
b. Thermoreceptor
c. Exteroceptor
d. Interoceptor
9. Function of restiform bodies in elasmobranchs is:
a. Swimming
b. Steering
c. Maintenance of equilibrium
d. Sound production
10. Pecten is found in the eyes of:
a. Bird
b. Fish
c. Lizard or snakes
d. Frog

11. The canal containing blood capillaries and nerves is called:
 - a. Volkmann
 - b. Haversian
 - c. Peristomeum
 - d. Compact
12. Cartilage found in nose of humans are:
 - a. Fibro
 - b. Hyaline
 - c. Elastic
 - d. Chondrocyte
13. Which among this pancreatic substrate is not for fats?
 - a. Chymotrypsin
 - b. Pancreatic lipase
 - c. Phospholipase
 - d. Cholesterol esterase
14. Palatoquadrate in cyclostomes is a:
 - a. Ear ossicle
 - b. Gill arch
 - c. Jaw
 - d. Tongue
15. A disabled person with one leg would have _____ distal phalanges in total in his body.
 - a. 15
 - b. 17
 - c. 19
 - d. 21
16. Gland with a prominent swelling above tail in related vertebrates in:
 - a. Poison
 - b. Uropygial
 - c. Scent
 - d. Femoral
17. Suppose you visit the mammalian section in a zoo and get a foul smell. To which category of glands can you attribute the smell may be coming from?
 - a. Sweat
 - b. Femoral
 - c. Scent
 - d. Epidermal
18. The number of spiracles supported by hyomandibular arch in cartilaginous fishes is:
 - a. 2
 - b. 3
 - c. 4
 - d. 5
19. Ceca in tetrapods helps in:
 - a. Surface area of digestion
 - b. Digestion of cellulose
 - c. Fermentation of food
 - d. Acidic medium for digestion
20. Lateral lingual swellings type of tongue is present in:
 - a. Aves
 - b. Cyclostomes
 - c. Reptiles
 - d. Fishes

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. How is the brain of a mammal more advanced than that of a reptile? | 10 |
| 2. Explain the mechanism of hearing and equilibrium in vertebrates. | 10 |
| 3. Give a comparative account of the structures of kidney in the different groups of vertebrates you have studied. | 10 |
| 4. What are visceral arches? Comment on the various types of visceral arches of vertebrates with diagrams wherever possible. | 3+7=10 |
| 5. Give a comparative account of the anatomical features of digestive system of vertebrates. | 10 |
| 6. Give a comparative account of hearts and aortic arches in reptiles, aves and mammals. | 10 |
| 7. What is the evolutionary significance of pharynx in vertebrates? Also describe the development and evolution of gills. | 5+5=10 |
| 8. What is jaw suspension? Explain the various types of jaw suspension from cyclostomes to mammals. | 3+7=10 |

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