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F - 1013

M.Sc. (Fourth Semester)
EXAMINATION, MAY-JUNE, 2022
ZOOLOGY
(Paper Second)
(Neurophysiology and General Physiology)

Time : Three Hours] *[Maximum Marks:80]*

Note- Attempt all sections as directed.

SECTION-A
(Objective/Multiple Choice Questions)

(1 mark each)

Note : Attempt all questions. Choose the correct answer.

1. Which of the following receptor are responsible for smell and taste stimulation?
   (A) Thermoreceptor
   (B) Mechanoreceptor
   (C) Chemoreceptor
   (D) Electroreceptor

2. _____is the anatomic site of nervous system where communication occur?
   (A) Junction
   (B) Cell fiber
   (C) Tight junction
   (D) Synapse
3. Which lobe is primarily responsible for hearing and language?
   (A) Temporal
   (B) Dorsal
   (C) Parietol
   (D) Prontal
4. Which is the most common neurotransmitter found in the brain?
   (A) Serotonin
   (B) Glutamate
   (C) Dopomine
   (D) GABA
5. The myclin sheath on neutron cells is derived from which cells?
   (A) Microglia
   (B) Neuroglia
   (C) Schwan cells
   (D) Neuron

6. Which of the following is non-inhibitory neurotransmitter?

   (A) Dopamine

   (B) Serotonin

   (C) Glutamate

   (D) Glycine

7. What is the role of schwan cell in neurotransmission?

   (A) Thermal insulation of neuronal axons

   (B) Enhance the speed of the action potential

   (C) Limit the speed of the action potential.

   (D) Protacts the neuronal soma from trauma.

8. Which is the name of the mechanism by which the action potential stimulates skeletal muscle to contract?

   (A) Excitation-contraction coupling

   (B) Endplate-Contraction generation

   (C) Inhibition-contraction coupling

   (D) Endplate-potential generation

9. The terminal buttons of a neuron are located at the end of its-

   (A) Myclin sheath

   (B) Axon

   (C) Dendrites

   (D) Cyton

10. The area on the left hemisphere related to speech is-

    (A) Amygdala

    (B) Frontal lobe

    (C) Occipital lobe

    (D) Broca's area

11. What does corpus collosum connects in the human brain?

    (A) Two optic lobes

    (B) Two cerebral hemisphere

    (C) Two lobes of pituitary gland

    (D) Bone and muscles

12. Which of the following is a balancing organ in humans?

    (A) Vestibular region

    (B) Eardrum

    (C) Cochlea

    (D) Organ of corti

13. Which of the following is largest gland in human body?

    (A) Thymus

    (B) Kidneys

    (C) Liver

    (D) Pancreas

14. Which of the following is the inner most layer of human eye?

(A) Sclera

(B) Choroid

(C) Cornea

(D) Retina

15. Lungs have large number of narrow tubes called_____.

(A) Alveoli

(B) Bronchioles

(C) Bronchi

(D) Trachea

16. Which structure closes the internal nerves during swallowing of food bolus?

(A) Uvula

(B) Tongue

(C) Palate

(D) Larynx

17. pH of salive is about_____.

(A) 6 to 7

(B) 6.8 to 7.1

(C) 7.5 to 8

(D) 9.6 to 10

18. The oesophagus is also known as

(A) Food pipe

(B) Wind pipe

(C) Voice box

(D) Water pipe

19. The female urethra is develop from

(A) Ectoderm

(B) Endoderm

(C) Mesoderm

(D) None of the above

20. Spermatogenesis is promoted by_____

(A) Estrogen

(B) Progestoron

(C) Testosterone

(D) Oxytocin

Section - B

(Very Short Answer Type Questions)

(2 marks each)

Note: Attempt all questions. Word limit one to two words 'or' sentence.

1. Define cerebrospinal fluid (CSF).

2. Define the terminal buttons.

3. Name any four neurotransmittors.
4. What do you mean by cranium?
5. What is the pH value of gastric juice?
6. Define the tidal volume?
7. Define the lymph?
8. Define Osmoregulation.

Section - C

(Short Answer Type Questions)

(3 marks each)

Note : Attempt all questions. Word limit 75 words.

1. Explain the synaptic transmission.
2. Explain the cell types in central nervous system.
3. Explain the structure of spinal cord.
4. Explain the spinal nerves.
5. Explain in short the gastrovascular cavity of coelenterates .
6. Differentiate the open and close circulation of body fluid.
7. Explain the asphyxia.
8. Explain Hypothermia.

Section - D

(Long Answer Type Questions)

(5 marks each)

Note : Attempt all questions. Each question has option. Word limit 150 words.

1. Give the detailed account on Electroencephalography.

OR

Give the detailed account on nerve- impulse conduction.

2. Explain the ascending and descending track of spinal cord.

OR

Give a detailed account on neurotransmitters.

3. Explain the structure of lung in mammals.

OR

Explain the circulation of Body fluid in mammals.

4. Give a detailed account on regulation of body temperature in animals.

OR

Explain the structure of muscles and its properties.