Roll No. .....

E–815

M. Sc. (Third Semester)

EXAMINATION, Dec.-Jan., 2020-21

BIOSCIENCE

Paper Third

(Animal Physiology)

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

Note : Attempt all Sections as directed.

Section—A 1 each

(Objective/Multiple Choice Questions)

Note : Attempt all questions.

Choose the correct answer :

1. Which of the following cells is responsible for blood-brain barrier ?

   (a) Astrocyte

   (b) Microglial cells

   (c) Oligodendrocyte

   (d) Schwann cells

P. T. O.

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >

2. Which of the following cells is responsible for myelin formation in the central nervous system ?

   (a) Astrocyte

   (b) Oligodendrocyte

   (c) Schwann cell

   (d) Microglial cells

3. Long term reflex action such as cycling and swimming are controlled by :

   (a) Cerebellum

   (b) Spinal cord

   (c) Hypothalamus

   (d) Cerebrum

4. Which of the following sequences describes the passage of an action potential in neuron ?

   (a) Axon, cell body, dendrite, synaptic cleft

   (b) Synaptic cleft, axon, dendrite, cell body

   (c) Dendrite, synaptic cleft, cell body, axon

   (d) Dendrite, cell body, axon, synaptic cleft

5. Neurotransmitter of neurone release at the stage of ..... .

   (a) Action membrane potential stage of neurons

   (b) Repolarization stage of neurone

   (c) Reflectile period of neurone

   (d) Resting membrane stage of neurone

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >

6. Which part of muscle will contract at the time of contraction ?

   (a) LMM

   (b) HMMS1

   (c) HMMS2

   (d) Actin

7. Most of the CO_2 sported in the blood :

   (a) In the form of HCO_3^-

   (b) Bound to Cl^-

   (c) Dissolved in plasma

   (d) In carbamino compound formed from plasma proteins

8. Which Antigen is found in blood group 'O' ?

   (a) Antigen 'A'

   (b) Antigen 'B'

   (c) Antigen 'A' and 'B'

   (d) Antigen 'H'

9. The most abundant protein in human blood is :

   (a) Transferrin

   (b) Albumin

   (c) Y-globulin

   (d) Hemoglobin

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >

10. Which of the following contains oxygenated blood in an adult human ?

    (a) Right atrium

    (b) Pulmonary artery

    (c) Pulmonary vein

    (d) All of the above

11. The Lup of the Lup-Dub sound of heart make is caused by the :

    (a) closing of the mitral and tricuspid valves

    (b) closing of the pulmonary and aortic valves

    (c) sound of blood rushing in to the atria

    (d) sound of blood rushing in to the ventricles

12. Prothrombin is a ..... .

    (a) Plasma protein

    (b) Glycoprotein

    (c) Lipoprotein

    (d) Modifier protein

13. The component in bile which helps to emulsify fat in the duodenum is :

    (a) Bile salt

    (b) Biliverdin

    (c) Bilirubin

    (d) Cholesterol

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >

14. The respiratory control centres are located in the ..... .

(a) Heart

(b) Lungs

(c) Diaphragm

(d) Brain

15. The enteric nervous system are found in :

(a) central nervous system

(b) respiratory system

(c) digestive system

(d) circulatory system

16. Which hormone is responsible to control hydrolytic secretion of pancreatic juice ?

(a) Cholecystokinin

(b) Secretin

(c) Cholecystiknin and secretin

(d) Endocrinin

17. On the summit of Mt. Everest, where the barometric pressure is about 250 mm Hg the partial pressure of O_2 is about :

(a) 0.1 mm Hg

(b) 0.5 mm Hg

(c) 5 mm Hg

(d) 50 mm Hg

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >

18. Which of the following is responsible for the movement of O_2 from the alveoli into the blood in the pulmonary capillaries ?
    (a) Active transport
    (b) Filtration
    (c) Secondary active transport
    (d) Passive diffusion

19. The majority of reabsorption of water occurs in the :
    (a) Renal capsule
    (b) Proximal convoluted tubules
    (c) Collecting duct
    (d) Ascending limb of the loop of Henle

20. Which of the following is a function of the kidneys ?
    (a) Release of hormone
    (b) Maintenance of plasma pH
    (c) Maintenance of plasma (electrolyte)
    (d) All of the above

Section—B 2 each

(Very Short Answer Type Questions)

Note : Answer using 2-3 sentences.

1. Explain erythroblastic faetalis.
2. Which factors are necessary for the formation of oxyhaemoglobulin ?
3. What is the function of nervous system ?

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >

4. Give the classification of muscles.
5. Write about the "P" waves of ECG.
6. Causes of acidemia and acidosis and write the difference between acidomia and acidosis.
7. Explain the function of Bile Salt.
8. Write about normal core temperature.

Section—C 3 each

(Short Answer Type Questions)

Note : Answer precisely using 75 words.

1. Explain intrinsic pathway of thromboplastin activation in blood coagulation.
2. Write about the internal and external inter-coastal muscle and role of diaphragm in breathing mechanism.
3. Describe the synthesis of acetylcholin and explain its catabolism.
4. Explain ultrastructure of skeletal muscle.
5. Explain junctional tissue of heart.
6. Explain the structure of uriniferous tubules.
7. Describe enteric nervous system of digestive track.
8. What is Acclimatization ?

Section—D 5 each

(Long Answer Type Questions)

Note : Answer precisely using 150 words.

1. Describe blood coagulating factor and explain defibrinozation.

Or

Write about CO_2 (carbon dioxide) transport mechanism.

P. T. O.

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >

2. Explain the molecular structure of skeletal muscle “protein”.

Or

What is synapse and describe the docking mechanism of neurotransmitters vesicle ?

3. Describe ornithine cycle ? Explain ultrafiltration in kidney.

Or

Describe systole and diastole in ventricle.

4. Explain the physiology of digestion upto stomach.

Or

Describe the theories of fat absorption.

Join our WhatsApp Channel for FREE Question Papers, Syllabus & Exam Updates
More papers: cguniversities.com | Tap here to join
JOIN NOW >