

PC- 505
(554) M.Sc. ZOOLOGY (FOURTH SEMESTER)
Semester Examination June-2020
Compulsory
Paper -I

Name/Title of Paper – Neurophysiology and General Physiology

Time : Three Hours]

[Maximum Marks : 80

[Minimum Passing Marks : 29

नोट : दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note : Answer from both the section as directed. The figures in the right-hand margin indicate marks.

SECTION-A

1. Answer the following multiple choice questions : (any ten)

1×10 = 10

- (a) Creatinin phosphate synthesized in
(i) Liver (ii) Kidney
(iii) Pancreas (iv) All of the above
- (b) In case if the blood takes long time to clot, it will result in
(i) Thrombosis (ii) Haemorrhage
(iii) Tissue trauma (iv) Blood Trauma
- (c) Which of the following cells is present in bowmen's capsule
(i) Mesengium (ii) Podocyte
(iii) Brush border cells (iv) Filtration slits
- (d) Kuffer cells found in
(i) Liver (ii) Pancreas
(iii) Brain (iv) Heart
- (e) Which one is inhibitory neurotransmitter ?
(i) GABA (ii) Acetyl choline
(iii) Serotonin (iv) Both a & b
- (f) When B.P. falls below a certain point Juxta glomerular cell start to secrete which hormone ?
(i) Renin (ii) Oxytocin
(iii) ADH (iv) None of the above
- (g) HCL is secreted by
(i) Peptic cell (ii) G-cell
(iii) Oxyntic cell (iv) Mucus neck cell
- (h) Both oligodendrites and schwann cell share the ability to
(i) Form a myelin sheath (ii) Remove cellular debris
(iii) Transport nutrients (iv) Line the ventricles
- (i) Blood from the lungs enters to the heart at the
(i) Left ventricle (ii) Right atrium
(iii) eft atrium (iv) Right ventricle
- (j) Another name of "voice box" is
(i) Pharynx (ii) Trachea
(iii) Larynx (iv) Bronchioles
- (k) What structure surrounds the glomerulus ad serves as the site of filtrate production ?
(i) Proximal tubule (ii) Renal pelvis
(iii) Distal tubule (iv) Bowman's capsule
- (l) In which part of the body digestion of protein begins ?
(i) Pancreas (ii) Stomach
(iii) Small Intestine (iv) Large Intestine
- (m) Name the largest part of the alimentary canal ?
(i) Large Intestine (ii) Small Intestine
(iii) Liver (iv) stomach
- (n) What is the function of Bile Juice secreted by Liver ?
(i) It makes the food alkaline (ii) It makes the food acidic
(iii) It brakes down the food (iv) None of the above

- (o) In which part of our body food gets absorbed ?
- | | |
|---------------------|----------------------|
| (i) Small Intestine | (ii) Large Intestine |
| (iii) stomach | (iv) Liver |

2. Short answer type (Attempt any five)

2×5 = 10

- (a) What is modulated & non modulated nerve fibre ? Write 5 differences between them.
- (b) What are Meninges ? what are meninges of the brain and spinal cord ?
- (c) What is cranial nerve ? write the classification & structure with example.
- (d) What is synapse. Give its structure and properties.
- (e) Write about cranial nerve.
- (f) Provide a brief note on various gastric juices, their composition and function
- (g) Write about ECG
- (h) Write about hypothermia and pyrexia
- (i) State about types of excretory substances in different group of animals
- (j) Write about the Blood group system, and its significance.

SECTION-B

Answer the following long answer type questions :

15×4 = 60

UNIT-I

3. State and explain the histological structure of different type of neuron and neuroglia and discuss their function.

OR

Discuss about any two of the followings

- (a) Nerve ending
- (b) Structure of Spinal Cord
- (c) Conduction of Nerve Impulse

UNIT-II

4. What re Neurotransmitters ? Discuss about their classification, structure and functions by giving suitable example for each of them.

OR

Discuss about any two of the followings

- (a) Spinal Nerve
- (b) Synapse
- (c) Difference between Sympathetic and parasympathetic nervous system (with help of diagram)

UNIT-III

5. Discuss in details about the mechanism of digestion of protein and different enzyme associated with it.

OR

Discuss about any two of the followings

- (a) Mechanism of blood coagulation.
- (b) Oxygen carriage
- (c) Composition of blood

UNIT-IV

6. State and explain about the detail structure and function of kidney with the help of suitable diagram.

OR

Discuss about any two of the followings

- (a) Structure and function of skeletal muscle
- (b) Sarcoplasmic reticulum and muscle protein
- (c) Involvement of liver in excretion.