

Lilavatibai Podar High School (ISC)

Preliminary Examination (Sem 2) -2021-22

Class -10

Maximum Marks: 40

Subject- Biology (Science paper 3)

Duration - 1 hour 30 minutes

Instructions: Answers to this Paper must be written on the paper provided separately.

You will not be allowed to write during the first 10 minutes.

This time is to be spent in reading the question paper.

The time given at the head of this Paper is the time allowed for writing the answers.

Answer all questions from Section A and any three questions from Section B.

The intended marks for questions or parts of questions are given in brackets []

SECTION A

(Attempt all questions)

Question 1

Name the following by choosing the correct answers to the questions from the given options.

(Do not copy the question. Write the correct answer only.)

[10]

- (i) Heart sounds are produced due to
(a) Closure of tricuspid and bicuspid valves
(b) Rushing of blood through valves producing turbulence
(c) Closure of atrioventricular valves and semilunar valves
(d) Entry of blood into auricles.
- (ii) In dim light the pupil is dilated and more light enters the eye because
(a) The radial muscles of the iris contract and the circular muscles relax.
(b) The radial muscles of the iris relax and the circular muscles contract
(c) The radial and circular muscles of the iris contract simultaneously
(d) The radial and circular muscles of the eyes relax simultaneously.
- (iii) When distant objects are to be focused by the eye, then
(a) Suspensory ligaments slacken and lens become longer
(b) Suspensory ligaments slacken and lens become more convex
(c) Suspensory ligaments are stretched and lens become less convex.
(d) Suspensory ligaments rupture and lens become opaque.
- (iv) The motor nerve conducts
(a) Sensory impulses from brain to the spinal cord.
(b) Motor impulses from spinal cord to the effector organ
(c) Sensory impulses from spinal cord to the effector organ
(d) Mixed impulses from spinal cord to the brain
- (v) The concave end of each kidney is a funnel shaped cavity known as
(a) Hilum
(b) Urinary bladder
(c) Ureter
(d) Pelvis
- (vi) The Henle's loop is associated with the function of
(a) Ultrafiltration
(b) Tubular secretion
(c) Selective reabsorption
(d) Micturition

- (vii) The outer area of the T. S of spinal cord contains
- Nephrons
 - White matter
 - Grey matter
 - Cerebrospinal fluid
- (viii) In males the formation of sperm is stimulated by this hormone
- Insulin
 - Luteinizing hormone
 - Follicle stimulating hormone
 - Oxytocin
- (ix) The structure which controls the cardiac and respiratory center in our body
- Cerebrum
 - Cerebellum
 - Pons varoli
 - Medulla oblongata
- (x) The swollen ampulla of the semicircular canals is concerned with
- Dynamic equilibrium
 - Hearing
 - Static equilibrium
 - Maintaining air pressure

SECTION B

(Attempt any three questions from this Section.)

Question 2.

- State two general features of hormones. [2]
- Name the blood vessels involved in pulmonary circulation? What is the significance of pulmonary circulation? [2]
- Given below is the diagram showing structures A and B. Label the parts 1 and 2. Give one functional difference between the structure A and B in the diagram below. [3]



- Give the biological terms for the following terms given below: [3]
 - Short sightedness
 - Ear drum
 - Yellow spot of the eye.

Question 3

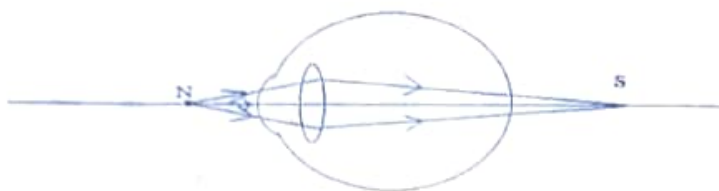
- What are lymph nodes? Name any two important lymphatic organs in our body? [2]
- Where is the pulmonary semilunar valve located? State its significant function. [2]
- Draw a neat and labelled diagram of the L.S of the human kidney and label any two parts. [3]
- Define the term Micturition. Name the two basic components of the nephron. [3]

Question 4.

- (i) Define the term 'double circulation'. [2]
- (ii) Give the exact location of the pancreas. [2]
- (iii) Mention separately the name of each condition, due to hyposecretion of thyroxine as seen in children, adults and in people living in hilly areas. [3]
- (iv) What is meant by agglutination? Which blood group is called as the universal donor and why? [3]

Question 5

- (i) Distinguish between aqueous humour and vitreous humour on the basis of their location and function. [2]
- (ii) One feels blinded for a short time while coming out of a dark room. Explain giving suitable reasons? [2]
- (iii) Given below is a diagram depicting a defect of the human eye in an elderly person whose eye lens is defective. Study the ray diagram and answer the questions that follow: [3]



- (a) Give the scientific term for the defect.
- (b) Give one possible reason for the defect.
- (c) What type of lens can be used to correct this defect?
- (iv) (a) Name any two hormones secreted by adrenal cortex. [3]
- (b) Name the condition which arises due to hyposecretion of hormones of adrenal cortex and give one symptom of the same.

Question 6

- (i) State the effect of sympathetic nervous system on the heartbeat and the pupils of the eye. [2]
- (ii) Give the full form of the following abbreviations: [2]
 - (a) ACTH
 - (b) LH
- (iii) Give the location, structure and function of the Vestibule of the human ear. [3]
- (iv) Complete the following table by filling in the blanks A, B and C. [3]

Name of Gland	Scientific name of Hormone secreted	Effect of Over secretion
(a) _____	Somatotropin	(b) _____
Adrenal gland[cortex]	(c) _____	Adrenal virilism