

PRELIMINARY EXAMINATION 2021-2022

SUBJECT : BIOLOGY

Std : X

Date: 13/ 01 / 2022

Max. Marks: 40

Duration: 1Hour 30min

Roll no.-----

Name:-----

General Instructions:

1. *Answers to this paper must be written on the paper provided separately.*
2. *You will **not** be allowed to write during the first **15** minutes. This time is to be spent in reading the question paper .*
3. *The time given at the head of the paper is the time allotted for writing the answers.*
4. *Attempt **all** questions from **Section A** and **any three** questions from **Section B**.*
5. *The intended marks of 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. The pigmented circular area seen in front of the eye:
(a) Cornea (b) Lens (c) Iris (d) Ciliary muscles
- ii. The part of the brain concerned with memory:
(a) Cerebrum (b) Cerebellum (c) Pons (d) Medulla Oblongata
- iii. A muscular wall is absent in:
(a) Capillary (b) Vein (c) Venule (d) Arteriole
- iv. Loop of Henle lies in:
(a) Medulla (b) Cortex (c) Pelvis (d) Ureter
- v. The outermost layer of meninges:
(a) Piamater (b) Arachnoid layer (c) Grey matter (d) Duramater
- vi. Which one of the following is not a simple reflex?
(a) Coughing (b) Blinking (c) Eating (d) Swallowing

- vii. Tear gland is also called:
(a) Gastric gland (b) Lacrimal gland (c) Salivary gland (d) Sebaceous gland
- viii. The mineral element needed for the functioning of the Thyroid gland:
(a) Sodium (b) Potassium (c) Magnesium (d) Iodine
- ix. The number of spinal nerves in humans:
(a) 12 pairs (b) 23 pairs (c) 31 pairs (d) 10 pairs
- x. The pigment that gives colour to urine:
(a) Haemoglobin (b) Chlorophyll (c) Urochrome (d) Melanin

SECTION-B

(Attempt any three questions from this section)

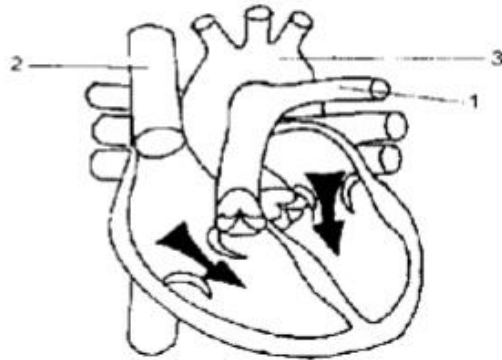
QUESTION-2

- A. Study the diagram given below and answer the following questions: [5]



- (i) Name the region in the kidney where this structure is present.
- (ii) Name the parts labelled 1, 2, 3 and 4.
- (iii) Name the stages involved in the formation of urine.
- (iv) What is the technical term given to the process occurring in 2 and 3?
Briefly describe the process.

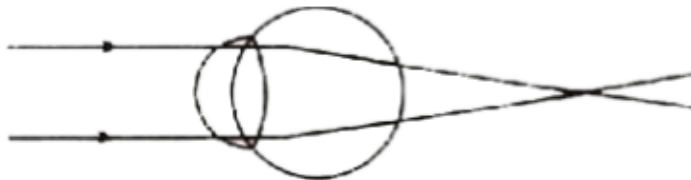
- B. The diagram given below represents the human heart in one phase of its functional activities. Study the same and answer the questions which follow: [5]



- (i) Name the phase.
- (ii) Label the parts 1, 2 and 3.
- (iii) Which part of the heart is contracting in this phase? Give a reason to support your answer.
- (iv) Draw a well-labeled diagram of part 1 and 2 to show the structural differences between them.

QUESTION-3

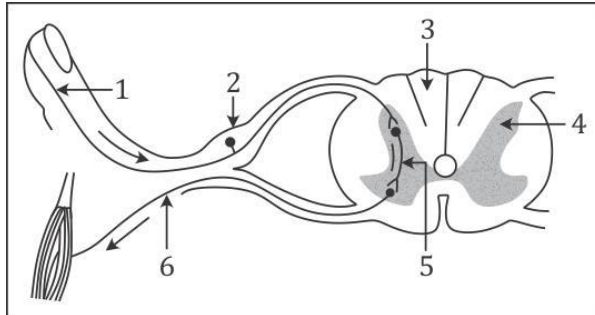
- A. Given below is a diagrammatic representation of a defect of the human eye.[5]



- (i) Identify the defect.
- (ii) Mention two reasons for the above defect.
- (iii) State how the defect can be rectified.
- (iv) Name the part of the eye responsible for maintaining the shape of the eyeball.

B.

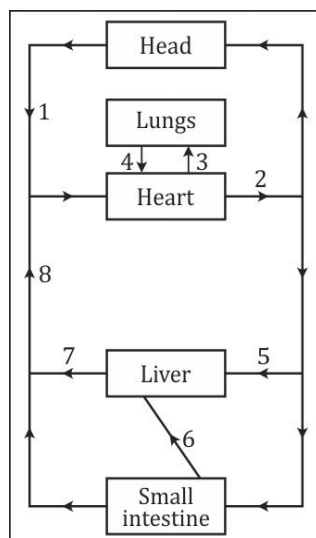
The diagram given below is a representation of a certain phenomenon pertaining to the nervous system. Study the diagram and answer the following questions: [5]



- (i) Name the phenomenon which is being depicted.
- (ii) Give the technical term for the point of contact between the two nerve cells.
- (iii) Name the parts 1, 2, 3 and 4.
- (iv) Write the functions of parts 5 and 6. How does the arrangement of neurons in the spinal cord differ from that of the brain.

QUESTION-4

- A. The diagram below represents the simplified pathway of the circulation of blood. Study the same and answer the questions which follow:

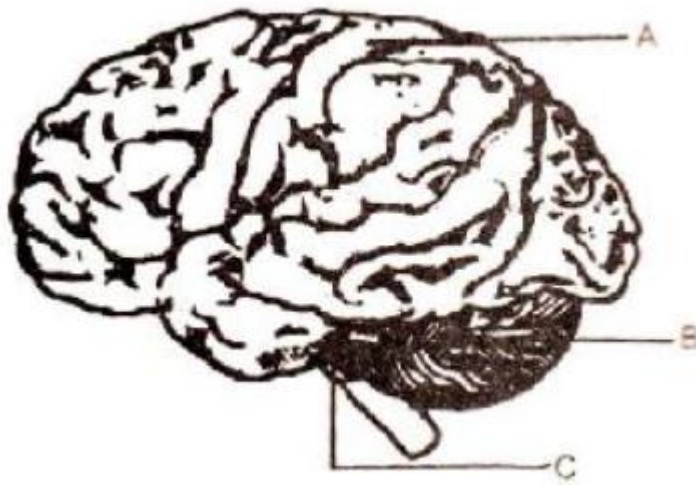


- (i) Name the blood vessels labelled 1 and 2.
- (ii) State the function of blood vessels labelled 5 and 8.

- (iii) What is the importance of the blood vessel labelled 6?
- (iv) Which blood vessel will contain a high amount of glucose and amino acids after a meal?
- (v) Draw a diagram of the different blood cells as seen in a smear of human blood. [5]

B.

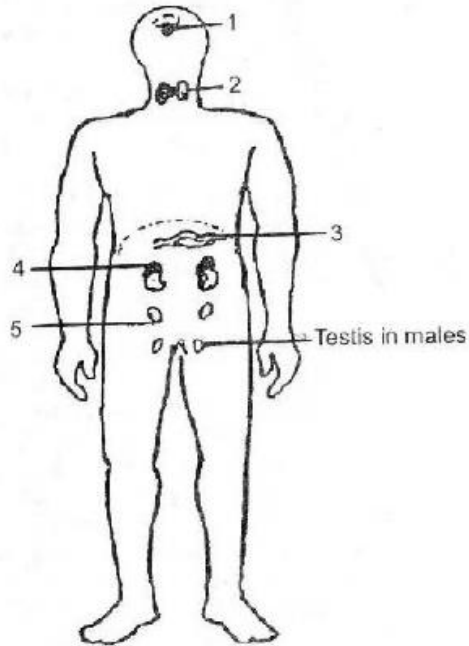
The diagram shows a section of the human brain. Answer the questions which follow:



- (i) Name the parts labelled A, B and C.
- (ii) Give the main function of each of the parts A, B and C.
- (iii) Name the three protective membranes covering the brain.
- (iv) Name the basic unit of the brain. [5]

QUESTION-5

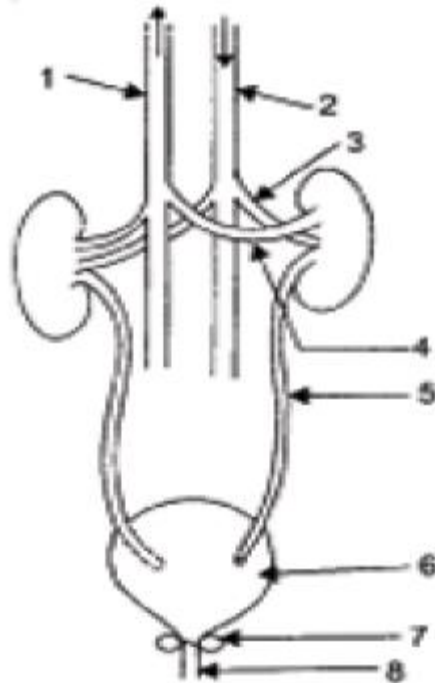
A. Given below is an outline of the human body showing the important glands. [5]



- (i) Name the glands marked 1 to 5.
- (ii) Name the hormone secreted by 2. Give one important function of this hormone.
- (iii) Name the endocrine cells present in part 3.
- (iv) Name the hormone secreted by part 4. Give one important function of this hormone.

B.

The diagram given below shows the excretory system in humans. Study the same and answer the questions.



(i) Name the parts labelled 1, 2, 3 and 4.

(ii) Give the main function of the parts labelled 5, 6, 7 and 8.

(iii) Name the endocrine gland which could be added in the diagram and state its location/position.

[5]

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BEST OF LUCK