

Time allowed: One and a half hours

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.

Attempt **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) Which of the following statement is true for erythrocytes?

- (a) They possess the power of amoeboid movement.
- (b) They produce antibodies and contribute in wound healing.
- (c) They are disc like structure without nucleus.
- (d) They are colourless and destroyed mainly in the spleen.

(ii) Which of the following is not true?

- (a) Outer region of cerebrum has white matter.
- (b) Cerebrum is largest part of the brain.
- (c) The outer region of wall of cerebrum is called cortex.
- (d) Outer region of cerebrum has grey matter.

(iii) Gull's disease is caused due to

- (a) Hypersecretion of thyroxine
- (b) Hyposecretion of thyroxine
- (c) Hypersecretion of adrenalin
- (d) Hyposecretion of adrenalin

(iv) The bactericidal enzyme found in tears is

- (a) lygase
- (b) lycopin
- (c) lysozyme
- (d) lyases

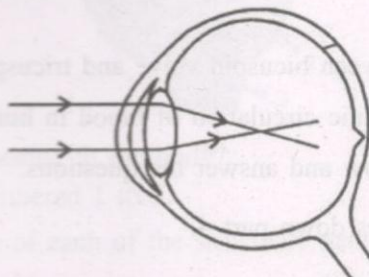
(v) Which of the following is true for distal convoluted tubule?

- (a) It is divided into pars convoluta and pars recta
- (b) It is nearer to the Bowman's capsule.
- (c) It is the end part of the nephron.
- (d) It is the U-shaped middle part of the nephron.

(vi) In 1998, an epidemic form of disease Dropsy occurred due to

- (a) Consumption of lettuce leaves that causes excess glucose and ammonia in the urine
- (b) Excess intake of dal of *Lathyrus*
- (c) Consumption of mustard oil adulterated with argemone seed oil.
- (d) All the above

- (vii) Optic lobes that control vision are found in
 (a) Fore brain (b) Mid brain (c) Hind brain (d) Spinal cord
- (viii) Which of the following is called a flight hormone?
 (a) Glucocorticoids (b) Glucagon (c) Adrenaline (d) Cortisone
- (ix) Observe the following diagram. It shows



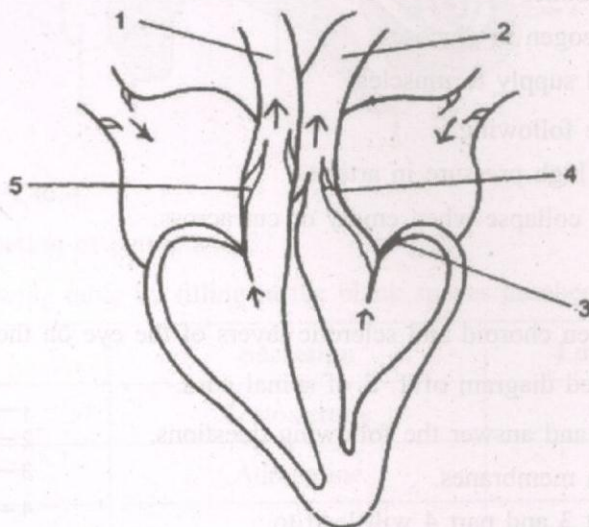
- (a) Corrected myopia (b) Long-sightedness (c) Short-sightedness (d) No defect at all
- (x) Which of the following is not a natural reflex action?
 (a) Blinking of eyes due to excess light (b) Salivation at the sight of food
 (c) Sneezing while dusting (d) Knee jerk

SECTION - B

(Attempt **any three** questions from this Section.)

Question 2.

- (i) Write two differences between Diabetes insipidus and Diabetes mellitus. [2]
- (ii) Define reflex action. Draw a labelled diagram to show it. [2]
- (iii) Given below is the diagram showing human heart. Study the diagram and answer the following questions. [3]



- (a) Name the parts labelled 1-4.
 (b) What type of blood flows through 2?
 (c) State the function of part 5.

(iv) Answer the following.

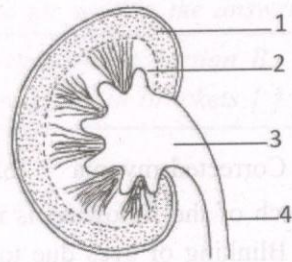
- (a) What is a lacrimal gland?
- (b) How is yellow spot different from brown spot in human eye?
- (c) Name an old age eye defect. Why is it caused?

[3]

Question 3.

- (i) Mention two differences between bicuspid valve and tricuspid valve.
- (ii) Explain pulmonary and systemic circulation of blood in human being.
- (iii) Study the diagram given below and answer the questions.

- (a) Name the fluid that passes down part 4.
- (b) Name the parts 1, 2, 3 and 4
- (c) Striped appearance of part 2 is found in the diagram. Why?



(iv) Show the following structures in a diagram of the human excretory system.

- (a) Renal artery
- (b) Kidney
- (c) Ureters

[2]

[2]

[3]

[3]

Question 4.

- (i) Explain the significance of hepatic portal system.
- (ii) All hormones are chemical signals. Justify the statement.
- (iii) Name three hormones responsible for
 - (a) Ossification of bones
 - (b) Converting glycogen to glucose
 - (c) Increased blood supply to muscles.
- (iv) Give reason for the following.
 - (a) Blood flows at high pressure in arteries.
 - (b) Arteries do not collapse when empty or cut across.

[2]

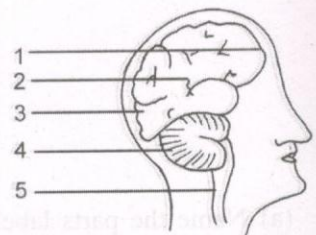
[2]

[3]

[3]

Question 5.

- (i) Differentiate between choroid and sclerotic layers of the eye on the basis of function.
- (ii) Draw a well labelled diagram of T. S of spinal cord.
- (iii) Study the diagram and answer the following questions.
 - (a) Name the brain membranes.
 - (b) Damage of part 3 and part 4 will lead to what type of handicaps?
 - (c) What do you mean by meningitis?
- (iv) Given alongside is a portion from the human body showing some important structure in ventral view.



[2]

[2]

[3]

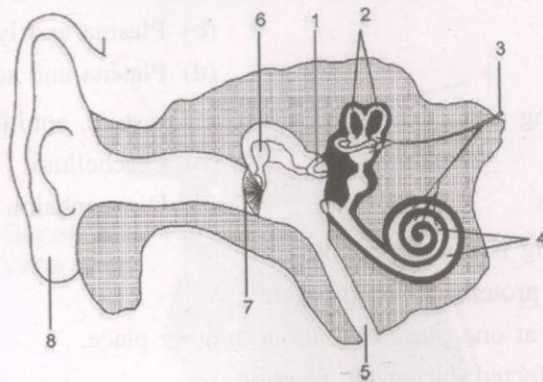
[3]



- (a) Where is this portion located in the body?
- (b) Name the structures numbered 1 to 3.
- (c) State one main function of each of the structures named above.

Question 6.

- (i) What is dark adaptation? What is the reason of it? [2]
- (ii) Name the lobe of the pituitary gland that secretes [2]
 - (a) Oxytocin
 - (b) ACTH
- (iii) Study the diagram and answer the following questions.



- (a) Name the parts 1 to 4.
- (b) What is the function of part 2 and 3? [3]
- (iv) Complete the following table by filling in the blank spaces numbered 1 to 6. [3]

Glands	Secretion	Function/Effect on Body
1	Testosterone	2
Adrenal	Adrenaline	3
Thyroid	4	Influences metabolism of cells
Lachrymal	Tears	5
Pituitary	Growth hormone	6