

Greenlawns High School
Terminal Examination 2024-25
Subject: Biology

Std: X C

Date: 09/10/2024

Time: 2 Hours

Marks: 80

- Answers to this Paper must be written on the paper provided separately.
- You will not be allowed to write during first 15 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.
- Section A is compulsory. Attempt any four questions from Section B.

SECTION A

(Attempt all questions from this Section.)

Question 1

(15)

Choose the correct answers to the questions from the given options.

i) The condition in which blood passes with urine due to some infection.

- a) Haematuria b) Uremia c) Glycosuria d) Albuminuria

ii) The blood vessel entering into Bowman's capsule.

- a) Aorta b) Efferent arteriole c) Afferent arteriole d) Renal Vein.

iii) The innermost layer of meninges is the _____.

- a) Dura mater b) Arachnoid c) Pia mater d) Gray matter.

iv) Which one of the following is mainly associated with maintenance of the posture?

- a) Cerebrum b) Cerebellum c) Thalamus d) Hypothalamus

v) Hyperopia can be corrected by _____.

- a) Convex lens b) Concave lens c) Cylindrical lens d) Round lens

vi) The median canal of cochlea is filled with _____.

- a) Lymph b) Tissue fluid c) Perilymph d) Endolymph

vii) Mineralocorticoid regulates mineral metabolism, specially _____.

- a) Ca^{++} and K^+ b) Na^+ and Zn^{++} c) Na^+ and K^+ d) Mg^{++} and Ca^{++}

Question 2

i) Name the following: (5)

- The plant tissue through which ascent of sap takes place.
- The artificial process of removal of urea and excess salts from the blood in case of kidney failure.
- A chemical which is known as neurotransmitter.
- The condition caused due to over secretion of growth hormone in an adult.
- Special pore bearing structures present on the margins of leaves through which guttation takes place.

ii) Complete the process of blood clotting by filling the blanks: (5)

The injured tissue cells and platelets which disintegrate at the site of the wound release a substance a) _____, which acts as an enzyme and with the help of the b) _____ ions present in plasma, it converts a substance c) _____ of plasma, into d) _____, which reacts with the e) _____ of plasma to convert it into fibrin. Fibrin forms network of sticky threads with RBC's to form a blood clot.

iii) Arrange and rewrite the terms in each group in the correct order so as to be in logical sequence beginning with the term that is underlined. (5)

- Dorsal root, Receptor, Effector, Ventral root, Associated neuron.
- Cochlea, Malleus, Pinna, Stapes, Incus.
- Insect, Peacock, Frog, Snake, Grass.
- Cortical cells, Root hair, Soil water, Endodermis, Xylem.
- Urinary bladder, Kidney, Urethra, Ureter.

iv) State whether true or false, if false rewrite the statement by correcting underlined word. (5)

- Addition of salt to pickles prevents growth of bacteria because they turn turgid.
- There are twelve pairs of Spinal nerves.
- Vitreous humour occupies the larger cavity of the eye ball behind the lens.
- Glucagon stimulates liver to convert glycogen into glucose.
- Abscisic acid induces dormancy of buds and seeds.

v) Give below is a diagram of a single renal tubule. Match the labelled structures with their correct activity taking place during the urine formation. (5)

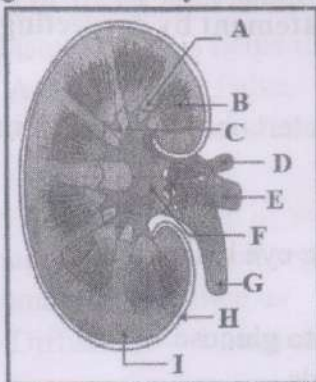
	1. Some absorption of water and sodium ions
	2. Receives glomerular filtrate.
	3. Wall secrete potassium and foreign chemicals such as penicillin into the forming urine.
	4. Ultrafiltration.
	5. Reabsorbs most water and much of glucose, sodium and chloride ions.

SECTION B

(Attempt any 4 questions from this Section.)

Question 3 (10)

- Differentiate between Astigmatism and cataract based on their cause of defect. (1)
- State the function of - a) Lenticels. b) Guard cells. (2)
- Name the leukocyte which has a nucleus with 3-4 lobes. Explain its function. (2)
- Write the location and function of Pons. (2)
- The diagram given below shows section of a human kidney. Study the diagram carefully and answer the questions that follow: (3)

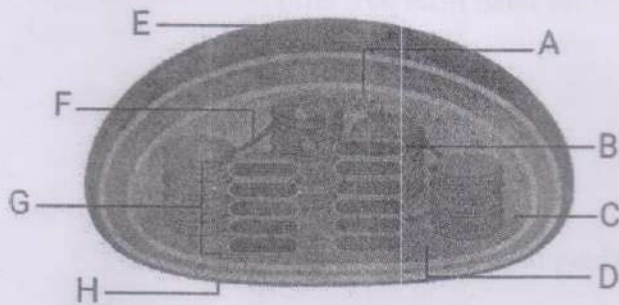


- Why does B have a striped appearance?
- Name the organ to which part G will get connected.
- Label F and H.

Question 4 (10)

i) Differentiate between Gibberellins and Ethylene based on their effect on senescence. (1)

ii) Study the following diagram and answer the questions that follow: (2)



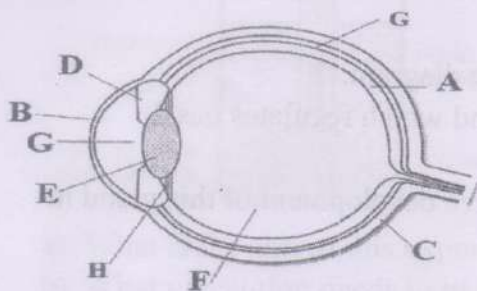
a) Identify the above cell organelle.

b) Label parts G and D.

iii) Explain the following functions of auxins: (2)

a) Apical Dominance b) Parthenocarpy.

iv) The diagram given below shows section of an eye. Study the diagram carefully and answer the questions that follow: (2)



a) What is the function of H?

b) On which part the sensory cells are present? Write its label and the name.

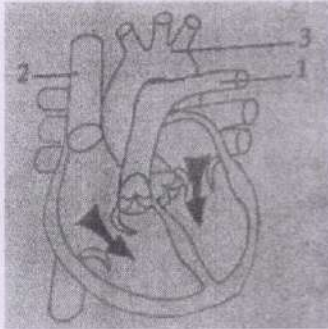
v) Draw a labelled diagram of generalised structure of a nerve cell. (3)

Question 5 (10)

i) Write the chemical equation to represent photosynthesis. (1)

ii) Give reasons- When you enter a dark room from bright lighted room, you experience difficulty in seeing objects for a short while. (2)

iii) The diagram given below represents the human heart in one phase of its functional activities. Study the diagram and answer the questions that follow: (2)



- Name the phase.
 - Which sound is produced during this phase explain with the reason.
- iv) Explain bleeding in plants. (2)
- v) Study the diagram given below and answer the questions that follow: (3)



- Name the endocrine gland shown in the diagram.
- Name the hormone secreted by the gland which regulates basal metabolism.
- Name the disease caused due to defective development of this gland in children.

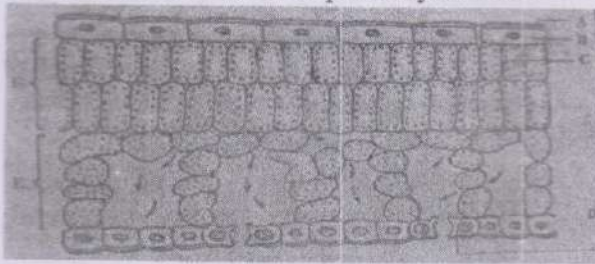
Question 6

- (10)
- Give reason- The leaves of the plants roll up on a bright sunny day. (1)
 - Name the part of the associated with- (2)
 - Static balance.
 - Dynamic balance.
 - Write any two examples of chemotropism. (2)
 - Write the location of the following endocrine glands- (2)
 - Adrenal gland.
 - Pituitary gland.
 - Explain what would happen if: (3)
 - Gibberellins are applied on apples.
 - A plant is kept inside a dark room by the side of an open window.
 - Ethylene is sprayed over peanut seeds.

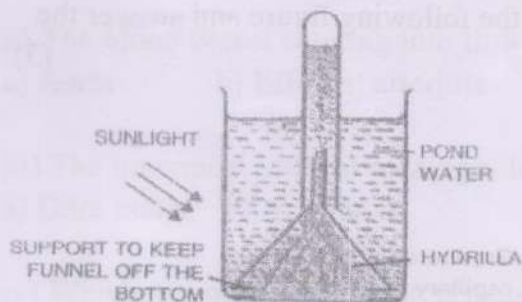
Question 7

(10)

- i) What is phosphorylation? (1)
- ii) The following diagram represents a vertical section of a part of a leaf. Study the diagram and answer the questions that follow: (2)
 - a) What is the collective term used for E and F?
 - b) State the role of C in photosynthesis.



- iii) a) Define: Reflex action. (2)
 - b) Which type of reflex Coughing is?
- iv) Explain the significance of transpiration. (2)
- v) The figure below represents an experiment set up to study a physiological process in plants, Study the figure and answer the questions that follow: (3)

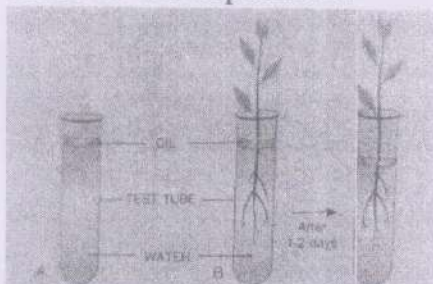


- a) What is the aim of this experiment?
- b) What precaution needs to be taken while setting up this experiment?
- c) How to confirm the results obtained at the end of this experiment?

Question 8

(10)

- i) Differentiate between turgor pressure and wall pressure. (1)
- ii) The following figure shows an experimental set up. Answer the question based on this experiment. (2)



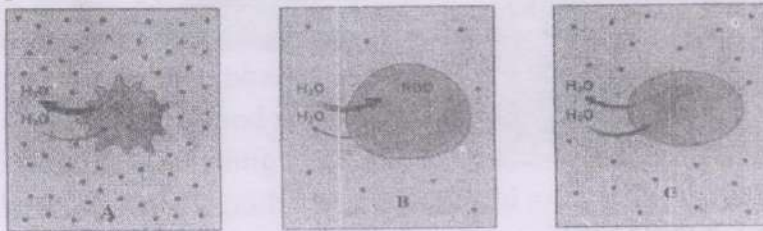
- a) Why the level of water reduces in test tube B after 1-2 days? b) Why is oil added over water?

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iii) Name the hormones secreted in the following conditions- (2)

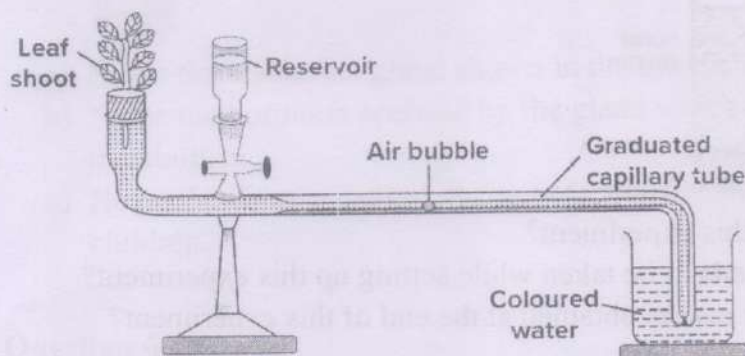
- When you stand in front of the large audience to give a speech, your mouth dries up and heart beat increase.
- A pregnant lady experiences vigorous contractions of uterus during the child birth.

iv) The RBC's were kept in three different solutions during an experiment, (2) following diagram shows result of the experiment. Answer the following questions related to this experiment.



- Write the technical terms of the solutions labelled as A and C.
- In solution C, size of the cell does not change. Why?

v) Study the experimental set up shown in the following figure and answer the questions that follow: (3)



- Name the device shown in the figure.
 - What is it used for?
 - Write any one precaution to be taken while setting up this device.
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