ICSE 2024 EXAMINATION

BIOLOGY

SAMPLE PAPER - 6

Maximum Marks: 80
Time allowed: Two hours
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.
The intended marks for questions or parts of questions are given in brackets [ ].

SECTION - A

(*Attempt **all** questions* from this section.)

Question 1.

Select the correct answers to the questions from the given options. (Do not copy the question. Write the correct answer only) : **[15]**

(i) When pregnancy does not occur, the life of corpus luteum is about :
(a) 14 days (b) 5 days (c) 10 days (d) 28 days

(ii) Chromosomes running to opposite poles after division can be seen during
(a) prophase (b) metaphase (c) anaphase (d) telophase

(iii) Removal of anthers from flowers artificially is known as
(a) castration (b) cutting (c) emasculation (d) cross-pollination

(iv) When a cell is put in a solution 'M', the water is moving out of the cell by osmosis. The solution 'M' is a
(a) hypotonic solution (b) isotonic solution (c) pure water (d) hypertonic solution

(v) Among the human ancestors listed below, the brain size was more than 1000 cc in
(a) *Homo erectus* (b) *Homo habilis* (c) Ramapithecus (d) Neanderthals

(vi) Gigantism and Acromegaly are due to :
(a) Hypersecretion of thyroxine
(b) Hypersecretion of growth hormone
(c) Hyposecretion of thyroxine
(d) Hyposecretion of growth hormone

(vii) Which of the following is not a natural reflex action?
(a) Knee-jerk (b) Blinking of eyes due to strong light
(c) Salivation at the sight of food (d) Sneezing when any irritant enters the nose

(viii) After mitotic cell division, a female human cell will have :
(a) 44 + XX chromosome
(b) 44 + XY chromosome
(c) 22 + X chromosome
(d) 22 + Y chromosome

(ix) The antibiotic penicillin is obtained from :
(a) Protozoan (b) Bacteria (c) Virus (d) Fungus

(x) The site of maturation of human sperms is the :
(a) Seminiferous tubule (b) Interstitial cells (c) Epididymis (d) Prostate gland

(xi) Correct sequence of stages in the cell cycle is :

(a) G_1, S, G_2, M (b) G_1, G_2, S, M (c) M, S, G_1, G_2 (d) G_2, G_1, S, M

(xii) The just next phase after the phase which is given in the diagram is

(a) Anaphase (b) Metaphase (c) Prophase (d) Cytokinesis

(xiii) A shoot from a balsam plant is kept in an eosin solution (pink coloured) for 3-4 hours. The pink colour is likely to be seen in

(a) phloem tissue (b) cortex (c) xylem tissue (d) endodermis

(xiv) During stomatal opening, the guard cells become turgid due to the increased concentration of :

(a) K^+ (b) Ca^{2+} (c) Na^+ (d) Mg^{2+}

(xv) Nitrifying bacteria like *Nitrosomonas* and *Nitrobacter* derive energy by :

(a) photosynthesis (b) heterotrophic mode of nutrition

(c) chemosynthesis (d) saprophytic mode of nutrition

Question 2.

(i) Name the following. **[5]**

(a) Human ancestor that represented the first man-like ancestor

(b) The device used to measure the rate of water intake by a plant

(c) The act of expelling full term foetus from mother's body

(d) The organism studied for industrial melanism

(e) Practice of forestry on lands outside forest area, in order to promote environmental and social development

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

(a) Vagina, Ovary, Uterus, Oviduct, Cervix

(b) Motor Neuron, Receptor, Sensory Neuron, Effector, Association Neuron

(c) Pupil, Yellow Spot, Cornea, Lens, Aqueous humour

(d) Stoma, Mesophyll cells, Xylem, Substomatal space, Intercellular space

(e) Cortical cells, Root hair, Soil, Water, Endodermis, Xylem

(iii) Match the items given in Column I with the most appropriate ones in Column II and rewrite the correct matching pairs. **[5]**

Column I	Column II
(a) Pituitary gland	1. Estrogen
(b) Sulphur dioxide	2. Calcium
(c) oviduct	3. Growth hormone
(d) Clotting of blood	4. Acid rain
(e) Guttation	5. Fertilisation
	6. Global warming
	7. Magnesium
	8. Hydathodes

(iv) Choose the odd one out from the following terms and name the category to which the others belong: [5]

(a) Haemoglobin, Glucagon, Iodopsin, Rhodopsin

(b) Urethra, Uterus, Urinary bladder, Ureter

(c) Transpiration, Photosynthesis, Phagocytosis, Guttation

(d) Cyton, Photon, Axon, Dendron

(e) Oxytocin, Insulin, Prolactin, Progesterone

(v) State the exact location of the following structures: [5]

(a) Tricuspid valve (b) Amnion (c) Yellow spot

(d) Seminal vesicle (e) Cowper's gland

SECTION - B

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

Question 3.

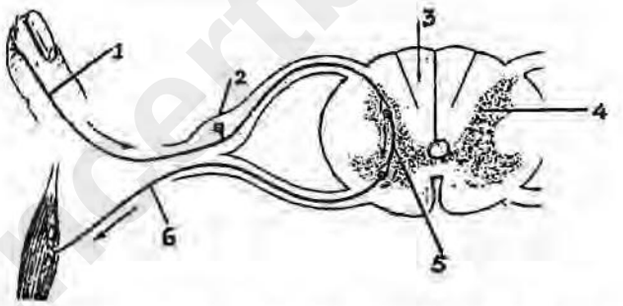
(i) Define osmoregulation. [1]

(ii) Give differences between Corpus callosum and Corpus luteum. (function) [2]

(iii) State any two harmful effects of noise pollution on human health. [2]

(iv) State Mendel's monohybrid cross with the help of a punnet square showing F_1 and F_2 results. [2]

(v) The diagram given below is a representation of a certain phenomenon pertaining to the nervous system. Study the diagram and answer the following questions : [3]



(a) The phenomenon which is depicted is controlled by which part of the body?

(b) Label 1, 2 and 6.

(c) Write the functions of part 5.

Question 4.

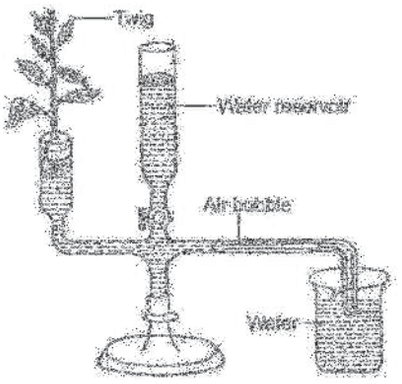
(i) Expand TSH. [1]

(ii) Name two substances responsible for ozone layer depletion. [2]

(iii) We cannot distinguish colours in moonlight. Give reason. [2]

(iv) Write any four major reasons for the population explosion in India. [2]

(v) The diagram below is an apparatus to study a particular phenomenon in plants. Observe the figure and answer the questions that follow : [3]



(a) Name the apparatus. What is this apparatus used for?
(b) Can this device measure the water lost by the leaves of the twig?
(c) What happens to the air bubble if the apparatus is kept in sunlight?

Question 5.

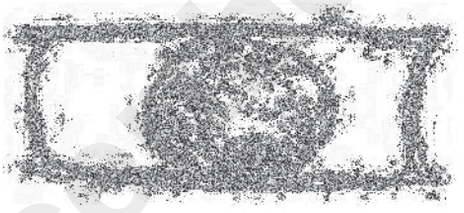
(i) Define tubectomy. [1]

(ii) Give two features (symptoms) of diabetes insipidus. [2]

(iii) Write the names of four nitrogenous bases in a DNA molecule. [2]

(iv) Differentiate between bicuspid and tricuspid valves. [2]

(v) The figure given below shows the epidermal cells of an onion bulb. This cell was then transferred to a drop of sugar solution. [3]



(a) What scientific term is used for the changes as shown above? Define it.

(b) What should be done to restore the cell back to its original condition?

(c) Give the scientific term for the recovery of the cell as a result of the step taken in (b) above.

Question 6.

(i) Define diapedesis. [1]

(ii) How does the arrangement of neurons in the spinal cord differ from that of the brain? [2]

(iii) Give the significance of diffusion. [2]

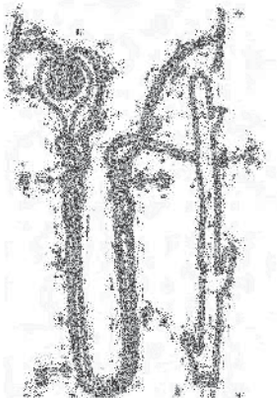
(iv) What function does adrenaline serve in the human body? [2]

(v) The given diagram represents a nephron and its blood supply. Study the diagram and answer the following questions : [3]

(a) Label parts 1, 2, 3 and 4.

(b) Mention the function of 2 and 3 briefly.

(c) Name the two main stages of urine formation.



Question 7.

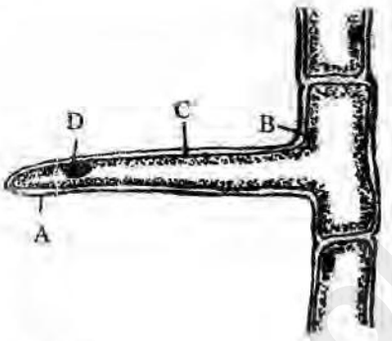
(i) Define – Allele. [1]

(ii) Photosynthesis support all life forms on the earth. Give reason. [2]

(iii) Give the difference between insulin and glucagon. [2]

(iv) Why is a green plant destarched before the experiment of photosynthesis? [2]

(v) The diagram below represents a layer of epidermal cells showing a fully-grown root hair. Study the diagram and answer the questions that follow : [3]



(a) Name the parts labelled A, B, C and D.

(b) The root hair cell is in a turgid state. Name the process that caused this state.

(c) Mention one distinct difference between the parts labelled A and C.

Question 8.

(i) Define Chiasma. [1]

(ii) Define the terms natality and mortality. [2]

(iii) Name the part of the human brain which is concerned with the following :

(1) Seat of memory

(2) Coordinates muscular activity [2]

(iv) People living in hilly regions usually suffer from simple goitre. Give reason. [2]

(v) Draw a well labelled diagram of a nerve cell and label the following parts – [3]

(a) Node of Ranvier (b) Nissil granules

SOLUTION

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Section A** is compulsory. Attempt **any four** questions from **Section B.
The intended marks for questions or parts of questions are given in brackets [ ].

SECTION - A

(*Attempt **all** questions* from this section.)

Question 1.

Select the correct answers to the questions from the given options. **[15]**

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

(i) The corpus luteum plays a crucial role in pregnancy by producing progesterone, which is essential for maintaining the uterine lining and supporting the early stages of pregnancy. What happens to the corpus luteum if the pregnancy does not occur?

(a) It start producing lysozymes
(b) It undergoes regression
(c) It binds to uterine membrane
(d) It start releasing oxytocin

Ans. (b) It undergoes regression

(ii) Chromosomes running to opposite poles after division can be seen during

(a) prophase (b) metaphase (c) anaphase (d) telophase

Ans. (c) anaphase

(iii) Removal of anthers from flowers artificially is known as

(a) castration (b) cutting (c) emasculation (d) cross-pollination

Ans. (c) emasculation

(iv) When a cell is put in a solution 'M', the water is moving out of the cell by osmosis. The solution 'M' is a

(a) hypotonic solution (b) isotonic solution (c) pure water (d) hypertonic solution

Ans. (d) hypertonic solution

(v) Among the human ancestors listed below, the brain size was more than 1000 cc in

(a) *Homo erectus* (b) *Homo habilis* (c) Ramapithecus (d) Neanderthals

Ans. (d) Neanderthals

(vi) Gigantism and Acromegaly are due to :

(a) Hypersecretion of thyroxine
(b) Hypersecretion of growth hormone
(c) Hyposecretion of thyroxine
(d) Hyposecretion of growth hormone

Ans. (b) Hypersecretion of growth hormone

(vii) Assertion (A): Cerebellum maintains posture, equilibrium and muscle tone.
Reason (R): Cerebellum contains motor area of the brain.

(a) Both (A) and (R) are true
(b) Both (A) and (R) are false
(c) (A) is true and (R) is false
(d) (A) is false and (R) is true

Ans. (a) Both (A) and (R) are true.

(viii) After mitotic cell division, a female human cell will have :

(a) 44 + XX chromosome
(b) 44 + XY chromosome
(c) 22 + X chromosome
(d) 22 + Y chromosome

Ans. (a) 44 + XX chromosome

(ix) The antibiotic penicillin is obtained from :

(a) Protozoan (b) Bacteria (c) Virus (d) Fungus

Ans. (d) Fungus

(x) The site of maturation of human sperms is the :

(a) Seminiferous tubule (b) Interstitial cells (c) Epididymis (d) Prostate gland

Ans. (c) Epididymis

(xi) Neha spent the entire day studying for an examination and skipped both breakfast and lunch. Which of the following hormones would increase in her bloodstream?

P- Glucagon
Q- Prolactin
R- Insulin

(a) P and Q (b) Only R (c) Only P (d) Q and R

Ans. (c) Only P

(xii) The just next phase after the phase which is given in the diagram is

(a) Anaphase (b) Metaphase (c) Prophase (d) Cytokinesis

Ans. (b) Metaphase

(xiii) A shoot from a balsam plant is kept in an eosin solution (pink coloured) for 3-4 hours. The pink colour is likely to be seen in

(a) phloem tissue (b) cortex (c) xylem tissue (d) endodermis

Ans. (c) xylem tissue

(xiv) During stomatal opening, the guard cells become turgid due to the increased concentration of :

(a) K^+ (b) Ca^{2+} (c) Na^+ (d) Mg^{2+}

Ans. (a) K^+

(xv) Nitrifying bacteria like *Nitrosomonas* and *Nitrobacter* derive energy by :

(a) photosynthesis
(b) heterotrophic mode of nutrition
(c) chemosynthesis
(d) saprophytic mode of nutrition

Ans. (c) chemosynthesis

Question 2.

(i) Name the following. **[5]**

(a) Human ancestor that represented the first man-like ancestor
(b) The device used to measure the rate of water intake by a plant
(c) The act of expelling full term foetus from mother's body
(d) The organism studied for industrial melanism
(e) Practice of forestry on lands outside forest area, in order to promote environmental and social development

Ans. (a) *Homo habilis*
(b) Potometer
(c) Parturition
(d) peppered moth
(e) Social forestry

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

(a) Vagina, Ovary, Uterus, Oviduct, Cervix
(b) Motor Neuron, Receptor, Sensory Neuron, Effector, Association Neuron
(c) Pupil, Yellow Spot, Cornea, Lens, Aqueous humour
(d) Stoma, Mesophyll cells, Xylem, Substomatal space, Intercellular space
(e) Cortical cells, Root hair, Soil water, Endodermis, Xylem

Ans. (a) Ovary, Oviduct, Uterus, Cervix, Vagina
(b) Receptor, Sensory neuron, Association neuron, Motor neuron, Effector
(c) Cornea, Aqueous humour, Pupil, Lens, Yellow spot
(d) Xylem, Mesophyll cells, Intercellular space, Substomatal space, Stoma
(e) Soil water, Root hair, Cortical cells, Endodermis, Xylem

(iii) Match the items given in Column I with the most appropriate ones in Column II and rewrite the correct matching pairs. **[5]**

Column I	**Column II**
(a) Pituitary gland	1. Estrogen
(b) Sulphur dioxide	2. Calcium
(c) oviduct	3. Growth hormone
(d) Clotting of blood	4. Acid rain
(e) Guttation	5. Fertilisation
	6. Global warming
	7. Magnesium
	8. Hydathodes

Ans. (a) Pituitary gland — 3. Growth hormone
(b) Sulphur dioxide — 4. Acid rain
(c) oviduct — 5. Fertilisation
(d) Clotting of blood — 2. Calcium
(e) Guttation — 8. Hydathodes

(iv) Choose the odd one out from the following terms and name the category to which the others belong: **[5]**

(a) Haemoglobin, Glucagon, Iodopsin, Rhodopsin
(b) Urethra, Uterus, Urinary bladder, Ureter
(c) Transpiration, Photosynthesis, Phagocytosis, Guttation
(d) Cyton, Photon, Axon, Dendron
(e) Oxytocin, Insulin, Prolactin, Progesterone

Ans. (a) Odd term : Glucagon
Category : Pigments in humans
(b) Odd term : Uterus
Category : Parts of urinary system
(c) Odd term : Phagocytosis
Category : Processes in plants

(d) Odd term : Photon
Category : Parts of a neuron

(e) Odd term : Insulin
Category : Hormones secreted during pregnancy

(v) State the exact location of the following structures: **[5]**

(a) Tricuspid valve (b) Amnion (c) Yellow spot (d) Seminal vesicle

(e) Cowper's gland

Ans. (a) Tricuspid valve consisting of three flaps is situated between the right atrium and the right ventricle of mammalian heart.

(b) Amnion is an extra embryonic membrane that encloses the embryo of reptiles, birds and mammals within the amniotic cavity.

(c) Yellow spot is a shallow depression in the retina of the eye, opposite to the lens.

(d) Seminal vesicles are a pair of lobulated glands located between the posterior surface of the urinary bladder and the rectum.

(e) Cowper's glands are small ovoid glands which open into the urethra in males.

SECTION - B

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

Question 3.

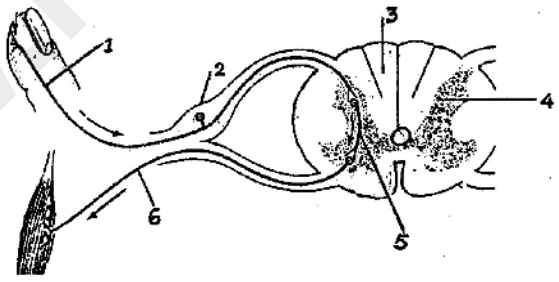
(i) Define osmoregulation. **[1]**

(ii) Give differences between Corpus callosum and Corpus luteum. (function) **[2]**

(iii) State any two harmful effects of noise pollution on human health. **[2]**

(iv) State Mendel's monohybrid cross with the help of a punnet square showing F_1 and F_2 results. **[2]**

(v) The diagram given below is a representation of a certain phenomenon pertaining to the nervous system. Study the diagram and answer the following questions : **[3]**



(a) The phenomenon which is depicted is controlled by which part of the body?

(b) Label 1, 2 and 6.

(c) Write the functions of part 5.

Ans.

(i) The process of control of water content and other ions in the body fluid to maintain a fixed concentration is called osmoregulation.

(ii) Differences between Corpus callosum and Corpus luteum

Corpus callosum	Corpus luteum
1. Corpus callosum is a band of white matter that provides a connection between the two halves of the cerebrum in the brain.	Corpus luteum is a yellowish mass of tissues found in the ovary of female mammals.
2. It enables the transfer of information from one cerebral hemisphere to the other.	It secretes the hormone progesterone.

(iii) 1. A sudden loud noise can damage ear drum and it can lead to deafness.
2. Rise in blood pressure and reduce mental efficiency.

(iv) A cross in which only one pair of contrasting characters is considered at a time is called monohybrid cross. For example :

Parents : TT (Tall plants) × t t (Dwarf plants)

F_1 Tt — Self pollination — All tall plants

F_2

	T	t
T	TT	Tt
t	Tt	tt

Phenotypic ratio : Tall and dwarf = 3 : 1, Genotypic ratio = 1 : 2 : 1

(v) (a) Spinal cord
(b) 1– Receptor 2– Sensory neuron 6– Effector
(c) Association neuron (5) interconnects the sensory neuron and motor neuron in central nervous system.

Question 4.

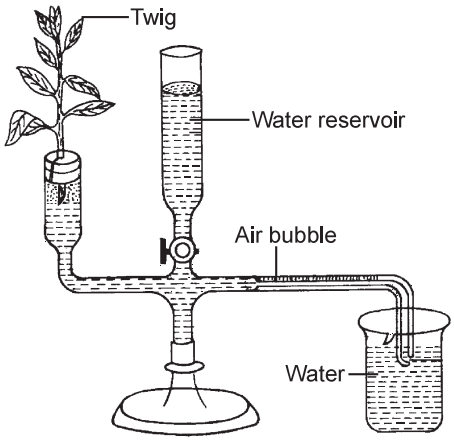
(i) Expand TSH. **[1]**

(ii) Name two substances responsible for ozone layer depletion. **[2]**

(iii) We cannot distinguish colours in moonlight. Give reason. **[2]**

(iv) Write any four major reasons for the population explosion in India. **[2]**

(v) The diagram below is an apparatus to study a particular phenomenon in plants. Observe the figure and answer the questions that follow : **[3]**



(a) Name the apparatus. What is this apparatus used for?
(b) Can this device measure the water lost by the leaves of the twig?
(c) What happens to the air bubble if the apparatus is kept in sunlight?

Ans.

(i) TSH – Thyroid Stimulating Hormone

(ii) • Chlorofluorocarbons (CFCs)

• Nitrogen monoxide (NO)

(iii) Since rods are sensitive to dim light, they do not respond to colour. But cones are sensitive to bright light and responsible for colour vision. In moonlight, there is no sufficient light to make the cones active and responsive. That is why, we cannot distinguish colours in moonlight.

(iv) The major reasons for the population explosion in India are —

(1) Illiteracy

(2) Desire for a male child

(3) Religious and social customs prohibit the use of contraceptives.

(4) Traditional belief that children are gifts of God.

(v) (a) Ganong's potometer. It is used for measuring the rate of water loss during transpiration in herbaceous plants.

(b) No, It does not measure the water lost but measure the water uptake by the cut shoot.

(c) The air bubble will move quite fast if the apparatus is kept in sunlight.

Question 5.

(i) Define tubectomy. **[1]**

(ii) Give two features (symptoms) of diabetes insipidus. **[2]**

(iii) Write the names of four nitrogenous bases in a DNA molecule. **[2]**

(iv) Differentiate between bicuspid and tricuspid valves. **[2]**

(v) The figure given below shows the epidermal cells of an onion bulb. This cell was then transferred to a drop of sugar solution. **[3]**

(a) What scientific term is used for the changes as shown above? Define it.

(b) What should be done to restore the cell back to its original condition?

(c) Give the scientific term for the recovery of the cell as a result of the step taken in (b) above.

Ans.

(i) **Tubectomy :** It is a method of family planning for females. In females, the fallopian tubes (oviducts) are ligated, i.e., tied to close the passage of the eggs from the ovary to the uterus.

(ii) In diabetes insipidus, deficiency of ADH (Antidiuretic Hormone) or vasopressin leads to frequent and copious urination thus, causing excessive thirst. It also results in poor growth, irritability, etc.

(iii) A DNA molecule contains two types of nitrogenous bases —
Purines — Adenine (A) and Guanine (G)
Pyrimidines — Thymine (T) and Cytosine (C)

(iv) **Bicuspid valve :** It guards the opening between the left auricle and left ventricle.

Tricuspid valve : It guards the opening between the right auricle and right ventricle.

(v) (a) Plasmolysis

The contraction or, shrinkage of protoplasm of a plant cell due to loss of water is called plasmolysis.

(b) It should be put in water to restore its original condition.

(c) Deplasmolysis

Question 6.

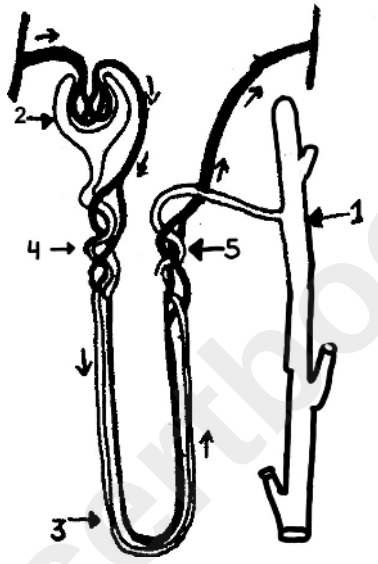
(i) Define diapedesis. **[1]**

(ii) How does the arrangement of neurons in the spinal cord differ from that of the brain? **[2]**

(iii) Give the significance of diffusion. **[2]**

(iv) What function does adrenaline serve in the human body? **[2]**

(v) The given diagram represents a nephron and its blood supply. Study the diagram and answer the following questions : **[3]**



(a) Label parts 1, 2, 3 and 4.

(b) Mention the function of 2 and 3 briefly.

(c) Name the two main stages of urine formation.

Ans.

(i) Diapedesis : The migration of blood cells especially leucocytes (WBCs) through an unruptured or intact wall of blood vessel into the surrounding tissue is called diapedesis.

(ii) Difference in arrangement of neurons

Neurons in Brain	Neurons in Spinal Cord
The inner part of the brain (cerebrum) contains white matter of the neurons i.e. axon, while the outer part contains grey matter i.e. cell bodies of neurons.	The inner portion of spinal cord contains grey matter i.e. cell bodies while the outer portion contains white matter i.e. axons of the neurons.

(iii) Significance of diffusion

- Transpiration of water vapour from stomata occurs through diffusion.
- Diffusion keeps the walls of the internal plant tissue moist.
- Ions and other molecules spread into the protoplast through diffusion.
- Pollinators are attracted to flowers due to the diffusion of aromatic compounds in surroundings.

(iv) Adrenaline is a hormone which prepares the body to meet any emergency situation to 'fight', i.e., to face the danger or for 'flight', to run away from it. An extra energy and strength are provided to the body for this

situation. Extra hormone is released into the blood at the time of emotional stress. The gland itself is stimulated by the nerve endings of the autonomic nervous system.

(v) (a) 1 — Collecting duct 3 — Loop of Henle
2 — Bowman's capsule 4 — Proximal convoluted tubule

(b) 2 represent Bowman's capsule. It carries out the function of ultra-filtration. 3 represents loop of Henle. Its main function is the reabsorption of water and sodium chloride from the filtrate.

(c) The two major stages of urine formation are —
1. Ultrafiltration
2. Reabsorption

Question 7.

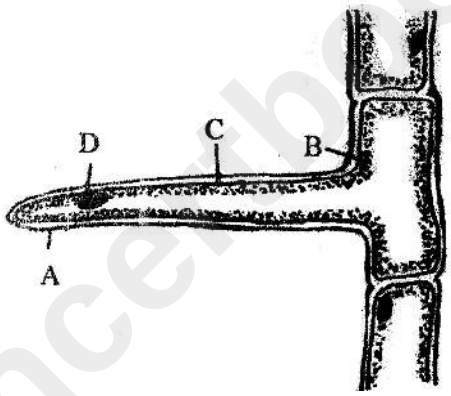
(i) Define – Allele. **[1]**

(ii) Photosynthesis support all life forms on the earth. Give reason. **[2]**

(iii) Give the difference between insulin and glucagon. **[2]**

(iv) Why is a green plant destarched before the experiment of photosynthesis? **[2]**

(v) The diagram below represents a layer of epidermal cells showing a fully-grown root hair. Study the diagram and answer the questions that follow : **[3]**



(a) Name the parts labelled A, B, C and D.

(b) The root hair cell is in a turgid state. Name the process that caused this state.

(c) Mention one distinct difference between the parts labelled A and C.

Ans.

(i) A pair of genes that controls the two alternative expressions of the same character and has the same loci in the homologous chromosomes is called the allele.

(ii) Photosynthesis is the process by which green plants prepare food. All the animals depend directly or indirectly on the plants for food. All the food chains begin with plants. Hence, photosynthesis support all life forms on the earth.

(iii) Glucagon converts glycogen to glucose.
Insulin converts blood glucose to glycogen.

(iv) Green plant is destarched before a photosynthetic experiment to ensure that any starch present in plant has been consumed. It allows for more accurate measurement of the rate of photosynthesis.

(v) (a) A - Cell wall C - Cell membrane
B - Cytoplasm D - Nucleus

(b) Endosmosis

(c) Cell wall (A) is made up of cellulose and is impermeable while cell membrane (C) is made up of protein and lipids and is semipermeable.

Question 8.

(i) Define Chiasma. **[1]**

(ii) Define the terms natality and mortality. **[2]**

(iii) Name the part of the human brain which is concerned with the following :
(1) Seat of memory
(2) Coordinates muscular activity **[2]**

(iv) People living in hilly regions usually suffer from simple goitre. Give reason. **[2]**

(v) Draw a well labelled diagram of a nerve cell and label the following parts – **[3]**
(a) Node of Ranvier (b) Nissl granules

Ans.

(i) Chiasma refers to structures Nissl granules :een a pair of homologous chromosomes by crossing over.

(ii) **Natality** is the number of live births per 1000 individuals in the population per year.
Mortality is the number of deaths per 1000 individuals in the population per year.

(iii) (1) Cerebrum
(2) Cerebellum

(iv) People living in hilly region do not get sufficient iodine in their diet because the soil is deficient in iodine.
Iodine is necessary for the synthesis of thyroid hormone. Insufficiency of iodine impact hormone synthesis which ultimately result in goitre.

(v) Neuron