



ICSE 2025 SPECIMEN

DRAFT MARKING SCHEME – BIOLOGY (SCIENCE PAPER 3)

**Question 1**

[15x1]

- (i) (b) Renal Medulla
- (ii) (c) Lysozyme
- (iii) (c) Both A and R are True
- (iv) (a) P – close, Q – Open
- (v) (d) Corpus callosum
- (vi) (b) Menarche
- (vii) (b) A is False and R is True.
- (viii) (c) P – Glucagon, Q – Vasopressin.
- (ix) (c) Homo sapiens
- (x) (d) Homologous chromosomes
- (xi) (b) A is False and R is True
- (xii) (a) Rupture of eardrum
- (xiii) (d) Both A and R are False
- (xiv) (c) Raj and Lata
- (xv) (d) Hypertonic, Exosmosis

**Question 2**

- (i) (a) Genes [5x1]
  - (b) Pollution
  - (c) Umbilical Cord
  - (d) Demography
  - (e) Thymine
  
- (ii) (a) Central [5x1]
  - (b) Cytons / Nerve cell bodies
  - (c) Axons / Nerve cell fibres
  - (d) Reflex
  - (e) Vertebral column



- (iii) (a) Auxins, Apical meristem, Cell elongation, Positive phototropism [5x1]  
(b) Kidney, Ureter, Urinary bladder, Urethra  
(c) Auditory canal, Malleus, Stapes, Organ of Corti  
(d) Chromatin fibres, Cytoplasm, Cell membrane, Cell wall  
(e) Inferior venacava, Right auricle, Pulmonary Artery, Lungs.
- (iv) (a) Phloem [5x1]  
(b) Zygote  
(c) Capillaries  
(d) Eustachian Tube  
(e) Lenticels
- (v) (a) 5 [5x1]  
(b) 1  
(c) 2  
(d) 4  
(e) 3

### Question 3

- (i) It is the movement of salt or ion across a cell membrane from lower to higher concentration by the use of energy. [1]
- (ii) Transpiration – Stomata, Lenticels, Cuticle [2]  
Guttation – Hydathodes
- (iii) (a) Increases [2]  
(b) Decreases
- (iv)  $6\text{CO}_2 + 12\text{H}_2\text{O} \xrightarrow[\text{Chlorophyll}]{\text{Sunlight}} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{H}_2\text{O} + 6\text{O}_2$  [2]
- (v) (a) Stomata [3]  
(b) Guard cells  
(c)  $\text{K}^+$  / Potassium ions

### Question 4

- (i) It is secreted under conditions of stress like anger, fear, excitement. It prepares the body to face the emergency situation. [1]



- (ii) Antidiuretic Hormone [2]  
Alcohol, Coconut water, Caffeine, etc.

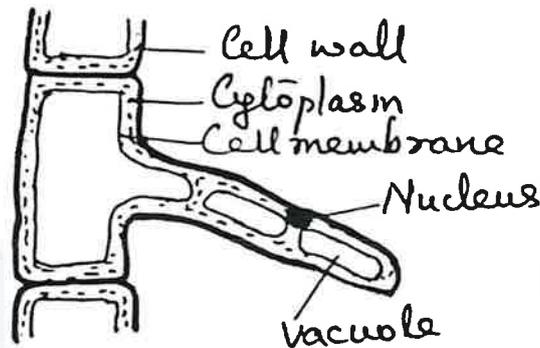
(Any one)

- (iii) (a) For synthesis of thyroxine by Thyroid gland [2]  
(b) For synthesis of chlorophyll.

- (iv) - To clean streets, roads, cities and towns [2]  
- To eliminate open defecation by constructing toilets.  
- Management of solid and liquid waste.

(Any two)

- (v) Diagram of a root hair. [3]



### Question 5

- (i) - Root hairs have thin cell walls [1]  
- Enormous surface area of roots  
- Higher concentration of cell sap than soil water

(Any one)

- (ii) It is development of fruits without fertilization. [2]  
Apples, tomatoes etc.

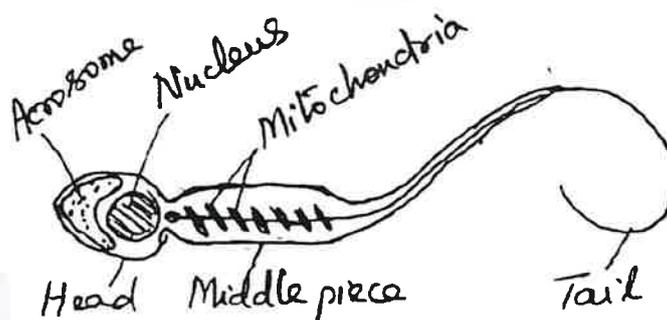
- (iii) Micturition: It is the expulsion of urine from the urinary bladder [2]  
Parturition: It the expulsion of the fully developed foetus from the uterus at the end of gestation.

- (iv) - Absorption of fats from intestines [2]  
- Drains excess tissue fluid into blood  
- Protects body from disease causing germs.

- (v) (a) Sewage, industrial effluents, oil spills [3]  
 (b) Spread of diseases like diarrhea, cholera, typhoid.  
 (c) Sewage must be treated before letting it into water bodies.

### Question 6

- (i) The two members of a pair of factors separate during gamete formation. [1]
- (ii) They stimulate other endocrine glands to secrete their specific hormones. E.g. TSH. [2]
- (iii) Phenotype – It is the observable characteristic which can be controlled genetically. [2]  
 Genotype – It is the set of genes present in the cells of an organism.
- (iv) To maintain an ideal temperature of 2 to 3° C less than body temperature for survival of sperms. [2]
- (v) Diagram of human sperm. [3]



### Question 7

- (i) Pisum Sativum [1]
- (ii) (a) Vasectomy [2]  
 (b) Tubectomy
- (iii) - Disturbs sleep [2]  
 - Interrupts concentration of thought
- (iv) (a) Shoot [2]  
 (b) Root

- (v) (a) Semicircular canals [3]  
(b) The fluid in the semi circular canals continue to spin for a short time even after the dancer stops spinning. This results in dizziness  
(c) Auditory nerve.

### Question 8

- (i) As water evaporates, a suction force is created which draws water up through the stem. [1]
- (ii) (a) Fresh water fish when placed in hypertonic salt solution lose water and shrink [2]  
*Or*  
Marine fish when placed in hypotonic salt solution absorb water and burst.  
(b) Seminiferous tubules produce sperms.  
*Or*  
Leydig cells secrete Testosterone.
- (iii) (a) In the equatorial plane [2]  
(b) Sister chromatids separate and move towards the opposite poles.
- (iv) (a) Conjunctiva, Cornea, Pupil, Lens, Fovea [2]  
(b) Optic nerve.
- (v) Diagram of Malpighian capsule [3]

