ICSE 2025 SPECIMEN

DRAFT MARKING SC£fEME — BIOLOGY (SCIENCE PAPER 3)

|  |  |  |  |
| --- | --- | --- | --- |
| Question 1  (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) | () | Raj and Lata |
| (xv) | (d) | Hypertonic, Exosmosis |
| Question 2  (i) | (a) | Genes | [5x1] |
|  | (b)  (c)  (d)  (e) | Pollution Umbilical Cord Demography Thymine |  |
| (ii) | (a)  (b)  (c)  (d)  (e) | Central  Cytons / Nerve cell bodies Axons / Nerve cell fibres Reflex  Vertebral column | [5x1] |

|  |  |  |  |
| --- | --- | --- | --- |
| (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 | [21 |
|  | (b) | Decreases |  |

(iv) 6CO2 + 12H2O Sunlight

Chlorophyll

C6H12O6+ 6H2O + 602

[2]

|  |  |  |
| --- | --- | --- |
| (v) | (a) | Stomata [3] |
|  | (b) | Guard cells |
| **Question 4** | (c) | K+ / Potassium ions |

1. It is secreted under conditions of stress like anger, fear, excitement. It prepares the body to face the emergency situation.

[l]

1. Antidiuretic Hormone

Alcohol, Coconut water, Caffeine, etc.

1. (a) For synthesis of thyroxine by Thyroid gland

(b) For synthesis of chlorophyll.

1. - To clean streets, roads, cities and towns
   * To eliminate open defecation by constructing toilets.
   * Management of solid and liquid waste.
2. Diagram of a root hair.

*(Any one)*

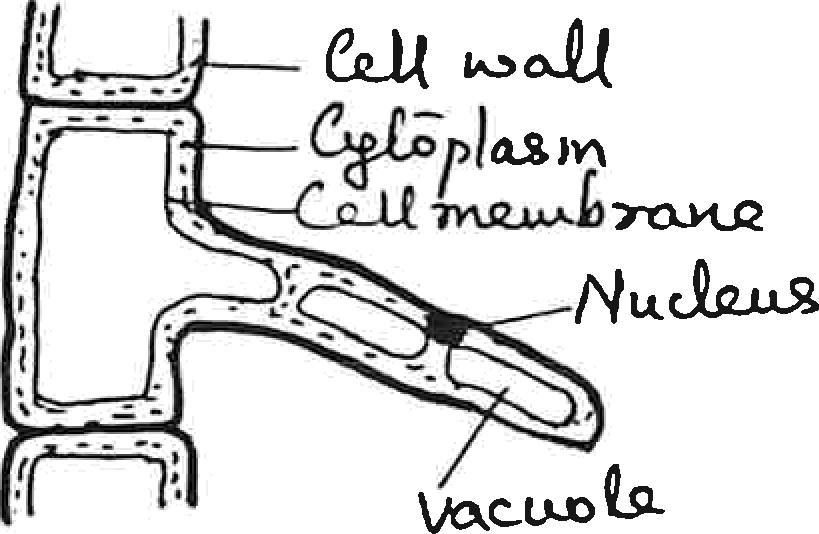
*(Any two)*

[2]

[2]

[2]

[3]



# Question 5

(i)

Root hairs have thin cell walls

* Enormous surface area of roots
* Higher concentration of cell sap than soil water

*(Any one)*

[1]

1. It is development of fruits without fertilization. Apples, tomatoes etc.
2. Micturition: It is the expulsion of urine from the urinary bladder

Parturition: It the expulsion of the fully developed foetus from the uterus at the end of gestation.

1. - Absorption of fats from intestines

Drains excess tissue fluid into blood

- Protects body from disease causing germs.

[2]

[2]

[2]

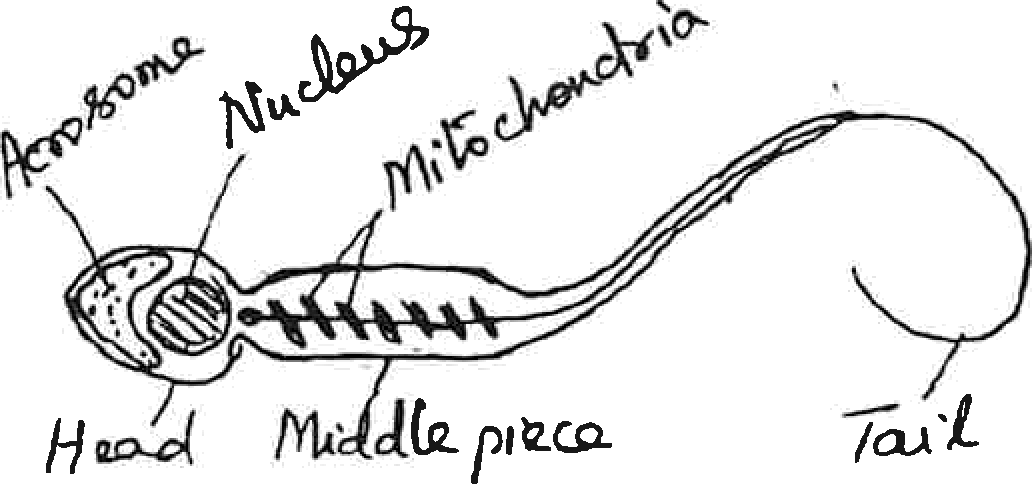
1. (a) Sewage, industrial effluents, oil spills



* 1. Spread of diseases like diarrhea, cholera, typhoid.
  2. Sewage must be treated before letting it into water bodies.

# Question 6

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



# Question 7

(Î) Pisum Sativum

[l]

[2]

[2]

[2]

[3]

[1]

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

1. (a) Semicircular canals



* 1. The fluid in the semi circular canals continue to spin for a short time even after the dancer stops spinning. This results in dizziness
  2. Auditory nerve.

# Question 8

(i) As water evaporates, a suction force is created which draws water up through the stem.

|  |  |  |  |
| --- | --- | --- | --- |
| (ii) | (a) | Fresh water fish when placed in hypertonic salt solution lose water and shrink | [2] |
|  | (b) | *Or*  Marine fish when placed in hypotonic salt solution absorb water and burst. Seminiferous tubules produce sperms.  *Or*  Leydig cells secrete Testosterone. |  |
| (iii) | (a)  (b) | In the equatorial plane  Sister chromatids separate and move towards the opposite poles. | [2] |
| (iv) | (a)  (b) | Conjunctiva, Cornea, Pupil, Lens, Fovea Optic nerve. | [2] |

(v) Diagram of Malpighian capsule [3]

