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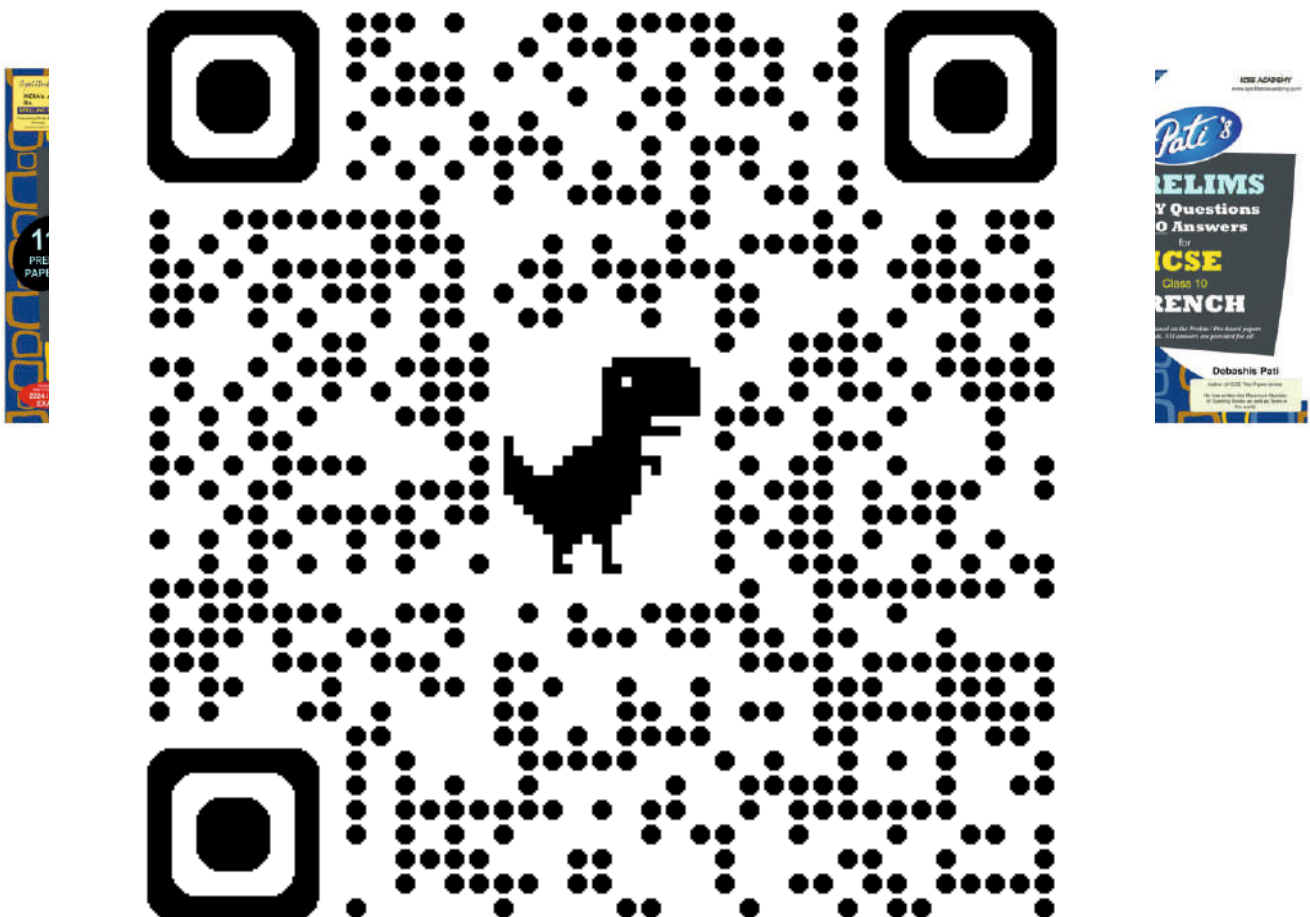
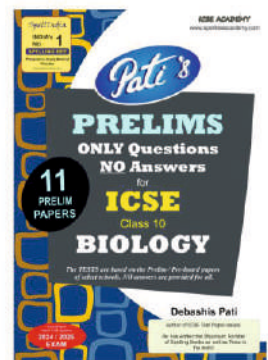
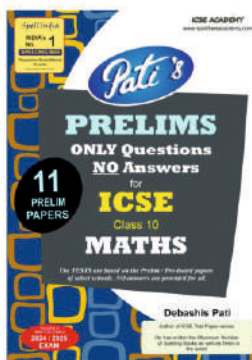
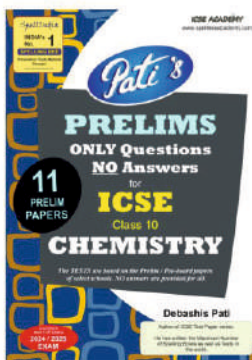
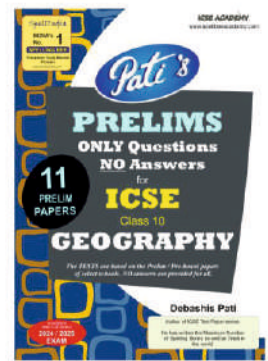
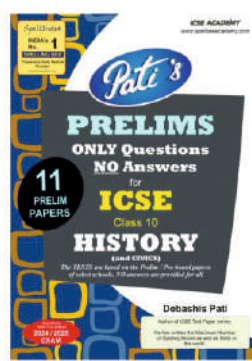
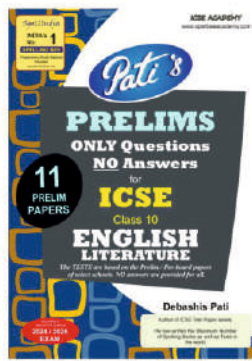
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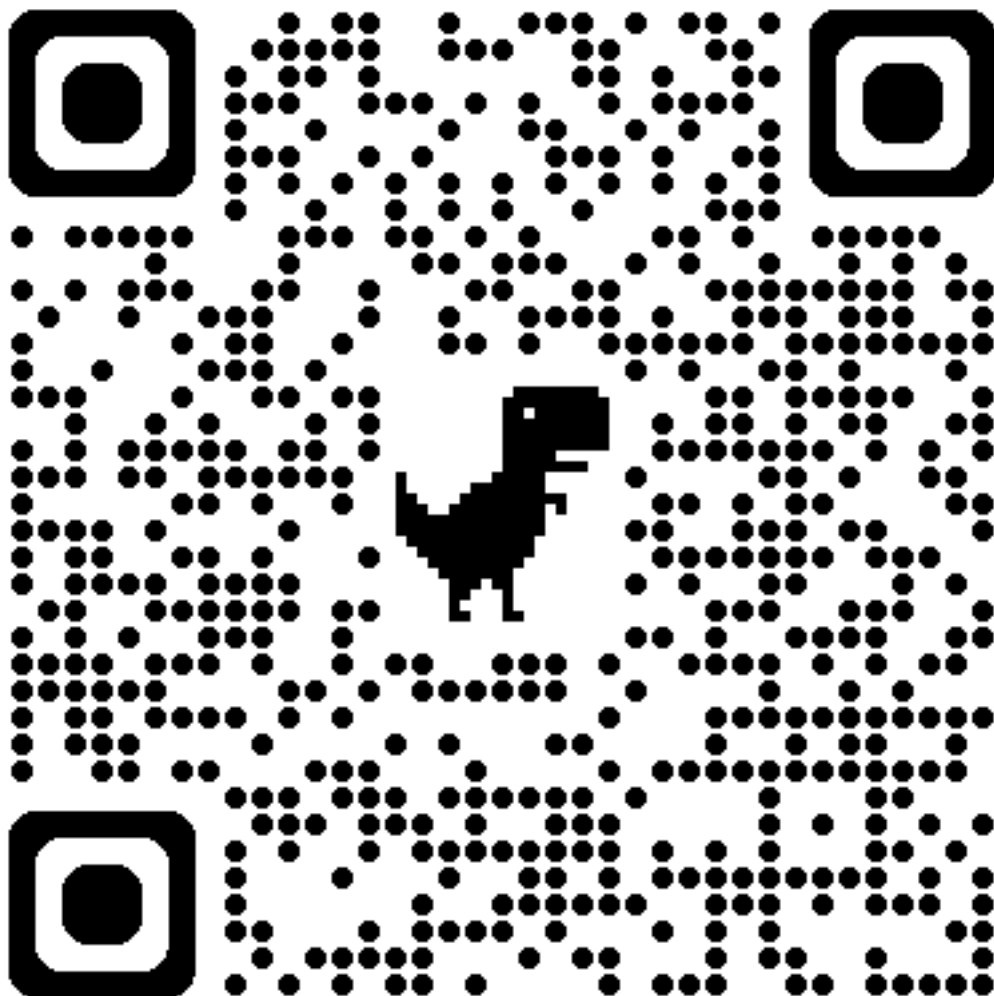




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Contents: (MCQs only)

- 1. Competency Based Questions 2025**
- 2. Specimen Papers : 2022 - 2026**
- 3. Past Year Papers : 2023 - 2026**

ICSE - CLASS X

Biology

I: Multiple Choice Questions (1 Mark Each)

S.No.	Questions
1.	<p><i>[Pollution]</i></p> <p>Rita suffers from constant headaches and high blood pressure. Her residence is close to an airport. What could be the <i>most likely</i> cause of her condition?</p> <p>(a) Noise pollution (b) Air pollution (c) Nuclear pollution (d) Water pollution</p> <p style="text-align: right;">[Analysis]</p>
2.	<p><i>[Human Anatomy and Physiology]</i></p> <p>An exo-endocrine gland in the human body is:</p> <p>(a) Pituitary gland (b) Pancreas (c) Salivary gland (d) Adrenal gland</p> <p style="text-align: right;">[Application & Analysis]</p>
3.	<p><i>[Human Anatomy and Physiology]</i></p> <p>Assertion: If both kidneys fail, urea from the blood is removed by dialysis. Reason: Accumulation of urea in the human body is toxic.</p> <p>(a) A is True, and R is false. (b) A is False, and R is true. (c) Both A and R are true. (d) Both A and R are false.</p> <p style="text-align: right;">[Application & Analysis]</p>
4.	<p><i>[Human Anatomy and Physiology]</i></p> <p>Rajesh was told to buy a blue cloth by his craft teacher. He couldn't differentiate blue colour from green and hence brought a green cloth to class. Which medical reason could have resulted in this?</p> <p>(a) Myopia (b) Cataract (c) Colour blindness (d) Hyperopia</p> <p style="text-align: right;">[Analysis]</p>

Questions

5. *[Plant Physiology]*

Mary sprinkled 5 kg of common salt on the grass growing on her lawn. After a couple of days, she observed that the grass had wilted and died. This was due to which of the following conditions?

- (a) Endosmosis
- (b) Turgidity
- (c) Deplasmolysis
- (d) Plasmolysis

[Understanding & Analysis]

6. *[Human Anatomy and Physiology]*

In cholera, patients suffer from vomiting and watery bowels. They may die due to the:

- (a) poisoning by the accumulation of high quantities of urea in the body.
- (b) ability of the intestines to absorb water into the blood.
- (c) excretion of almost all the water by the kidneys.
- (d) the failure of the kidneys.

[Understanding]

7. *[Basic Biology]*

A.

B.



The given figures A and B show _____ and _____ stages of cell division.

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

[Analysis]

8. *[Human Anatomy and Physiology]*

A person is suffering from kidney failure. He is put on a dialysis machine by the doctors. The osmotic pressure of dialysis fluid should be:

- (a) equal to that of blood.
- (b) more than that of blood.
- (c) less than that of blood.
- (d) equal to zero.

[Application]

S.No.	Questions
9.	<p><i>[Human Anatomy and Physiology]</i></p> <p>A squirrel is in a scary situation. The secreted adrenaline prepares the body to meet the situation. Which of the following is NOT TRUE for this situation?</p> <p>(a) Adrenaline prepares the body to fight danger. (b) Extra energy and strength are provided to the body. (c) At the time of the stress, fewer hormones are released into the blood. (d) Adrenaline prepares the body to run away from danger.</p> <p style="text-align: right;">[Understanding]</p>
10.	<p><i>[Human Anatomy and Physiology]</i></p> <p>Assertion (A): The main pulmonary artery pumps oxygenated blood from the right ventricle into the lungs.</p> <p>Reason (R): Inside the lungs, the artery divides and divides several times to form capillaries around the air sacs.</p> <p>(a) A is True, and R is false. (b) A is False, and R is true. (c) Both A and R are true. (d) Both A and R are false.</p> <p style="text-align: right;">[Understanding]</p>
11.	<p><i>[Human Anatomy and Physiology]</i></p> <p>Given below are some common reflexes in humans.</p> <ol style="list-style-type: none"> i. Quick closing of the eyelids when a strong beam of light is flashed across. ii. Apply brakes to your vehicle if anything suddenly comes in front. iii. Playing a musical instrument. iv. Coughing reflex, when the food is swallowed, enters the windpipe. <p>The conditioned reflexes are:</p> <p>(a) i and ii (b) ii and iii (c) iii and iv (d) i and iv</p> <p style="text-align: right;">[Analysis]</p>
12.	<p><i>[Plant Physiology]</i></p> <p>Electrons released on splitting of water molecules in photosynthesis are used in producing:</p> <p>(a) NADP (b) NADPH (c) ATP (d) O₂</p> <p style="text-align: right;">[Analysis]</p>

13.

[Human Anatomy and Physiology]

The four major steps in seeing an object are:

- i. interpretation by the brain.
- ii. focussing of image.
- iii. entry of light rays.
- iv. transmission of nerve impulses from the retina & brain.

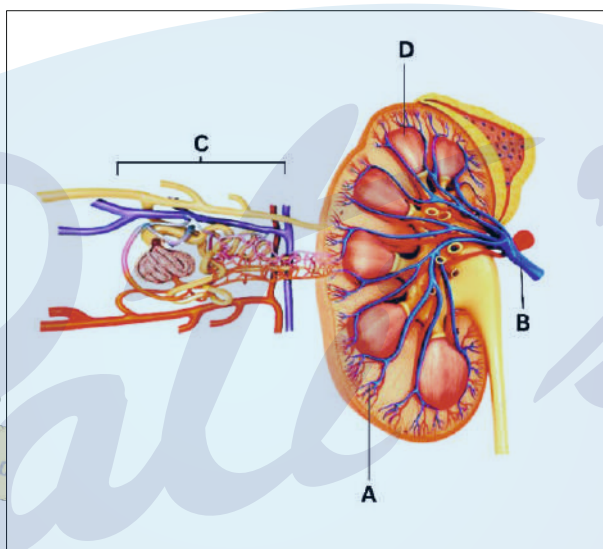
The correct sequence will be:

- (a) i, ii, iii, iv
- (b) ii, iii, iv, i
- (c) iii, ii, iv, i
- (d) iv, i, ii, iii

[Understanding]

14.

[Human Anatomy and Physiology]



Based on the given figure, identify the structural as well as the functional unit of kidney:

- (a) A
- (b) B
- (c) C
- (d) D

[Analysis]

15.

[Human Anatomy and Physiology]

Assertion: Seminiferous tubules produce sperms.

Reason: Seminiferous tubules secrete Oxytocin, which aids in the production of sperm.

- (a) A is True, and R is false.
- (b) A is False, and R is true.
- (c) Both A and R are true.
- (d) Both A and R are false.

[Analysis]

16. *[Human Anatomy and Physiology]*

Assertion: The nerve impulse travels from the axon of a neuron to the axon of another neuron.

Reason: The end portion of the axon has swollen ends, which store neurotransmitters.

- (a) A is True, and R is false.
- (b) A is False, and R is true.
- (c) Both A and R are true.
- (d) Both A and R are false.

[Understanding]

 17. *[Human Anatomy and Physiology]*

Thomas played cricket on a hot summer afternoon. His urine output was much less, though he drank plenty of water. What could be the possible cause?



P - Kidneys reabsorb a lot of water

Q - Sweat glands are active

R - Kidneys absorb less water

S - Sweat glands are inactive

- (a) R and Q
- (b) P and Q
- (c) P and S
- (d) R and S

[Analysis & Application]

 18. *[Pollution]*

Acid rain is caused due to polluted gases like CO_2 , SO_2 , and oxides of nitrogen. The pollution which does not take place immediately after acid rain is:

- (a) Air pollution
- (b) Water pollution
- (c) Soil Pollution
- (d) Noise Pollution

[Understanding & Analysis]

S.No.	Questions
19.	<p><i>[Human Anatomy and Physiology]</i></p> <p>Surya's father was diagnosed with Diabetes mellitus. The doctor advised him to limit certain foods. Which are the foods he should avoid eating?</p> <p>P - Sweets Q - Leafy vegetables R - Bananas S - Pulses</p> <p>(a) P and R (b) Q and S (c) R and S (d) P and Q</p> <p style="text-align: right;">[Application]</p>
20.	<p><i>[Human Anatomy and Physiology]</i></p> <p>During light adaptation:</p> <p>(a) Rods and cones become active. (b) Rods and cones become inactive. (c) Rods become active and cones inactive. (d) Cones become active and rods inactive.</p> <p style="text-align: right;">[Understanding & Analysis]</p>
21.	<p><i>[Plant Physiology]</i></p> <p>A cell of a leaf of an aquatic plant is kept in a 5% salt solution for some time. The phenomenon which will take place is/are:</p> <p>(a) turgidity (b) plasmolysis (c) turgidity and flaccidity (d) plasmolysis and flaccidity</p> <p style="text-align: right;">[Application]</p>

Answer Key	
S.No.	Expected Answers
1.	(a) Noise pollution
2.	(b) Pancreas
3.	(c) Both A and R are true
4.	(c) Colour blindness
5.	(d) Plasmolysis
6.	(a) poisoning by the accumulation of high quantities of urea in the body.
7.	(c) metaphase, anaphase
8.	(a) equal to that of blood
9.	(c) At the time of the stress, fewer hormones are released into the blood.
10.	(b) A is False, and R is true
11.	(b) ii and iii
12.	(c) ATP
13.	(c) iii, ii, iv, i
14.	(c) C
15.	(a) A is True, and R is false
16.	(b) A is False, and R is true
17.	(b) P and Q
18.	(a) Air pollution
19.	(a) P and R
20.	(d) Cones become active and rods inactive.
21.	(d) plasmolysis and flaccidity

SPECIMEN QUESTION PAPER

SECTION A (40 Marks)

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

Question 1

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

[15]

(Do not copy the question, write the correct answers only.)

(i) Allen's blood report showed an abnormal decrease in the number of R.B.C. He is suffering from:

- (a) Polycythemia
- (b) Erythropenia
- (c) Glycosuria
- (d) Haemophilia

[Application]

(ii) A farmer notices that storing ripe mangoes with unripe ones speeds up the ripening process. The phytohormone primarily responsible for this phenomenon is:

- (a) Auxins
- (b) Cytokinins
- (c) Gibberellins
- (d) Ethylene

[Analysis]

(iii) **Assertion (A)** : Oxygen is produced during light dependent reactions of photosynthesis.

Reason (R) : Oxygen is released as a byproduct during photolysis.

- (a) (A) is true and (R) is false.
- (b) (A) is false and (R) is true.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

[Understanding]

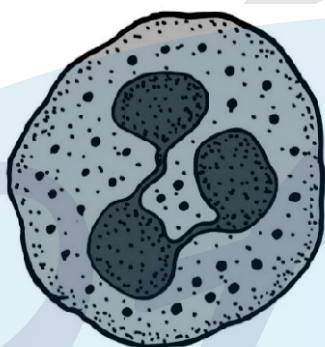
(iv) Reena gets emotionally stressed when the school examinations are approaching. Which hormone is responsible for this condition?

- (a) Adrenaline
- (b) Thyroxine
- (c) Insulin
- (d) Growth hormone

[Application]

(v) The diagram given below is that of a Neutrophil.

The function is _____:



- (a) secreting hormone
- (b) transporting food
- (c) phagocytosis
- (d) producing antibodies

[Understanding
& Recall]

(vi) **Assertion (A):** Pituitary gland is known as the master gland.

Reason (R): It regulates the activities of other exocrine glands.

- (a) (A) is true and (R) is false.
- (b) (A) is false and (R) is true.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

[Understanding]

- (vii) Aruna went to a theatre to watch a movie on a bright sunny morning. As she came out of the theatre, she felt a dazzling effect and could not open her eyes. After a few minutes her vision became normal. This is due to:



- (a) Accommodation of eye
(b) Mutation
(c) Polarisation
(d) Adaptation of eyes **[Analysis]**
- (viii) Reflex actions provide a survival advantage because they:
- (a) are controlled by the cerebrum.
(b) are controlled by the medulla oblongata.
(c) require no conscious thought, allowing rapid responses.
(d) always involve the spinal cord. **[Recall]**
- (ix) Industrial melanism is the phenomenon by which the peppered moth:
- (a) die due to industrial growth.
(b) in polluted areas, became darker in colour for better camouflage.
(c) became lighter in colour due to natural selection. **[Understanding & Recall]**
(d) became resistant to industrial pollution.

(x) The hormone that maintains the thickening of the endometrium during pregnancy is:

- (a) Oestrogen
- (b) ACTH
- (c) Progesterone
- (d) Oxytocin

[Recall]

(xi) The onset of menstruation in a human female is called:

- (a) Menopause
- (b) Menarche
- (c) Ovulation
- (d) Oogenesis

[Understanding
& Recall]

(xii) The number of autosomes and allosomes present in a human cell:

- (a) 22 allosomes, 1 autosome
- (b) 22 pairs of autosomes, 1 pair of allosome
- (c) 22 autosomes, 1 allosome
- (d) 22 pairs of allosomes, 1 pair of autosome

[Recall]

(xiii) Cultural revolution favours a steep rise in human population. Identify the correct sequence of revolution:

- (a) Tool making, Scientific and Industrial, Agricultural
- (b) Agricultural, Tool making, Scientific and Industrial
- (c) Scientific and Industrial, Agricultural, Tool making
- (d) Tool making, Agricultural, Scientific and Industrial

[Understanding]

(xiv) Tanvi tried to match the phases of menstrual cycle with the number of days as given in the table below:

PHASE	DAYS
P – Follicular Phase	Day 5 – 12
Q – Luteal Phase	Day 15 – 28
R – Menstrual Phase	Day 3 – 5
S – Ovulatory Phase	Day 13 or 14

Identify the correct sequence:

- (a) P, Q, R, S
- (b) Q, S, R, P
- (c) R, P, S, Q
- (d) S, R, P, Q

[Application]

(xv) Aditya who is fond of roller skating. Identify the correct terms which help him to maintain his body balance:



- (a) Cerebellum, Semicircular canals, Vestibule
- (b) Vestibule, Sclera, Cerebrum
- (c) Malleus, Semicircular canals, Utriculus
- (d) Sacculus, Stapes, Cochlea

[Analysis & Application]

ICSE 2026 SPECIMEN
DRAFT MARKING SCHEME – BIOLOGY (SCIENCE PAPER 3)

Question 1		[15x1]
(i)	(b) Erythropenia	
(ii)	(d) Ethylene	
(iii)	(c) Both (A) and (R) are true and (R) is the correct explanation of (A).	
(iv)	(a) Adrenaline	
(v)	(c) Phagocytosis	
(vi)	(a) (A) is True but (R) is False	
(vii)	(d) Adaptation of eyes	
(viii)	(c) Require no conscious thought, allowing rapid responses.	
(ix)	(b) In polluted areas became darker in colour for better camouflage.	
(x)	(c) Progesterone	
(xi)	(a) Vasectomy in males, Tubectomy in females	
(xii)	(b) 22 pairs of autosomes, 1 pair of allosome	
(xiii)	(d) Tool making, Agricultural, Scientific and Industrial	
(xiv)	(c) R, P S, Q	
(xv)	(a) Cerebellum, Semicircular canals, Vestibule	

SPECIMEN QUESTION PAPER

SECTION A

(Attempt *all* questions from this Section.)

Question 1

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

[15]

(Do not copy the question, write the correct answers only.)

(i) The Loops of Henle lie in

- (a) Renal Cortex
- (b) Renal Medulla
- (c) Renal Pelvis
- (d) Renal Artery

[Recall]

(ii) The antiseptic present in tears:

- (a) Iodine
- (b) Hydrogen peroxide
- (c) Lysozyme
- (d) Lysosome

[Recall]

(iii) **Assertion (A)** : The foetus respire but does not breathe.

Reason (R) : The maternal blood supplies oxygen to the foetus through placenta.

- (a) A is True and R is False
- (b) A is False and R is True
- (c) Both A and R are True
- (d) Both A and R are False

[Analysis]

(iv) During ventricular systole, the atrioventricular valves (P) _____ and semilunar valves (Q) _____.

- (a) P – close, Q – Open
- (b) P – close, Q – Close
- (c) P – open, Q – Close
- (d) P – open, Q – Open

[Application]

(v) The two cerebral hemispheres are joined by a sheet of fibres called:

- (a) Pons
- (b) Corpus luteum
- (c) Hypothalamus
- (d) Corpus callosum

[Recall]

(vi) The onset of menstruation in a human female is called:

- (a) Menopause
- (b) Menarche
- (c) Ovulation
- (d) Oogenesis

[Recall]

(vii) **Assertion (A):** Rods and Cones are photoreceptors in the sclera of eyeball.

Reason (R): Rods are sensitive to dim light.

- (a) A is True and R is False.
- (b) A is False and R is True.
- (c) Both A and R are True.
- (d) Both A and R are False.

[Application]

(viii) Priya tried to match the hormones with their effect on the human body. She tabulated the pairs as follows:

Hormone	Effect on the body
P	Stimulates conversion of Glycogen to Glucose
Q	Reabsorption of water by the Nephrons.

Identify the correct pair of hormones.

- (a) P – Insulin, Q – Glucagon.
- (b) P – Adrenaline, Q – Oxytocin.
- (c) P – Glucagon, Q – Vasopressin.
- (d) P – Vasopressin, Q – Adrenaline.

[Understanding
& Application]

(ix) While studying the stages in the evolution of man, a well-developed chin is observed in

- (a) Homo habilis
- (b) Homo erectus
- (c) Homo sapiens
- (d) Australopithecus

[Recall]

(x) A pair of corresponding chromosomes of the same shape, size and one from each parent is called:

- (a) Autosomes
- (b) Allosomes
- (c) Analogous chromosomes
- (d) Homologous chromosomes

[Recall]

(xi) **Assertion (A):** We urinate more in summer.

Reason (R): Sweat glands are more active in summer.

- (a) A is True and R is False
- (b) A is False and R is True
- (c) Both A and R are True
- (d) Both A and R are False

[Understanding]

(xii) Rahul inserted a hairpin into his right ear to remove ear wax. He felt a sudden sharp pain with loss of hearing. This was due to:

- (a) Rupture of eardrum
- (b) Rupture of vestibule
- (c) Rupture of cornea
- (d) Rupture of pinna

[Analysis]

(xiii) **Assertion (A):** All food chains begin with herbivores.

Reason (R): Green plants are heterotrophs.

- (a) A is True and R is False
- (b) A is False and R is True
- (c) Both A and R are True
- (d) Both A and R are False

[Application]

(xiv) A biology teacher asked her students to give two examples of vestigial organs in the human body.

Raj said: Wisdom teeth and Pinna

Sonu said: Body hair and large intestine

Lata said: Vermiform appendix and wisdom teeth

Abhay said: Pinna and Ossicles

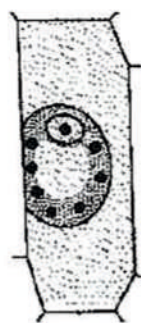
Who were correct?

- (a) Abhay and Sonu
- (b) Sonu and Lata
- (c) Raj and Lata
- (d) Abhay and Raj

[Recall &
Understanding]

(xv) During a practical exam, a plant cell in a particular solution was placed under a compound microscope. Students were told to observe the cell and name the tonicity of the solution and mention the process that occurred in the cell.

- (a) Isotonic, Endosmosis
- (b) Hypotonic, Active Transport
- (c) Hypertonic, Endosmosis
- (d) Hypertonic, Exosmosis



[Analysis &
Application]

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

ICSE 2024 EXAMINATION
SPECIMEN QUESTION PAPER

BIOLOGY
(SCIENCE PAPER – 3)

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

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

[15]

(Do not copy the question, write the correct answers only.)

- (i) Loss of water as droplets from the hydathodes is called:
- (a) Transpiration
 - (b) Bleeding
 - (c) Guttation
 - (d) Evaporation
- (ii) Synthesis phase in the cell cycle is called so, because of the synthesis of more:
- (a) Glucose
 - (b) Proteins
 - (c) RNA
 - (d) DNA

- (iii) While playing with his friends, Peter inserted a stick into his ear. He lost his hearing due to the rupture of:
- (a) Ear drum
 - (b) Pericardium
 - (c) Cornea
 - (d) Pinna
- (iv) The prime source of Chloro fluorocarbons is:
- (a) Vehicular emissions
 - (b) Refrigeration equipment
 - (c) Sewage
 - (d) Effluents
- (v) Oxygenated blood to heart is supplied by:
- (a) Hepatic artery
 - (b) Coronary artery
 - (c) Renal artery
 - (d) Pulmonary artery
- (vi) Assertion (A): There is frequent urination in summer than in winter.
Reason (R): In summer we lose a lot of water as sweat, so the kidneys reabsorb more water. Hence, urine formed is less in summer than in winter.
- (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
- (vii) The age restrictions for marriage for boys and girls by law in India is:
- (a) Boys 18 years, Girls 21 years
 - (b) Boys 17 years, Girls 16 years
 - (c) Boys 21 years, Girls 18 years
 - (d) Boys 20 years, Girls 17 years

- (viii) Hari is fond of watching the fish in an aquarium. So, he set up an aquarium in his house. Along with a number of fresh water fish, he also placed a clown fish which is a salt water fish. After few hours, the clown fish was found dead and floating on water. This was due to:
- (a) Endosmosis
 - (b) Exosmosis
 - (c) Osmoregulation
 - (d) Excretion
- (ix) The solvent used for dissolving chlorophyll while testing a leaf for starch is:
- (a) Sodium hydroxide
 - (b) Lime water
 - (c) Water
 - (d) Ethyl alcohol
- (x) The structure related to storage and maturation of sperms in a human male is:
- (a) Epididymis
 - (b) Epidermis
 - (c) Epithelium
 - (d) Endothelium
- (xi) A sequence of DNA has 200 nitrogenous base pairs, of which 100 are Thymine-Adenine pairs. What is the number of Cytosine-Guanine pairs in this sequence:
- (a) 50
 - (b) 200
 - (c) 100
 - (d) 25
- (xii) The stress hormone in plants which functions during a drought is:
- (a) Auxins
 - (b) Abscisic acid
 - (c) Ethylene
 - (d) Cytokinins

(xiii) Compressed natural gas (CNG) is proposed to be a better alternative to fossil fuel

Which of the following reasons makes it a better alternative?

P. Combustion leaves little or no residue

Q. Absence of Carbon in CNG

R. Easily available

(a) Only P

(b) Only Q

(c) Only P and R

(d) Only Q and R

(xiv) The ground substance present in chloroplast is:

(a) Stoma

(b) Stroma

(c) Grana

(d) Thylakoids

(xv) Lata wanted to cross the road. She looked on either side of the road and then walked across to the other side of the road.

Which of the following is / are involved in the process described above?

1. Cerebrum

2. Cerebellum

3. Skeletal muscles

4. Medulla Oblongata

(a) Only 3

(b) Only 1 and 3

(c) Only 1, 3 and 4

(d) Only 1, 2 and 3

Answers : Specimen 2024

I c ii d iii a iv b v b vi d vii c viii a ix d x a
xi c xii b xiii c xiv b xv d

ICSE 2023 EXAMINATION
SPECIMEN QUESTION PAPER
BIOLOGY
(SCIENCE PAPER – 3)

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. [15]

Write the correct answer only) :

- (i) A muscular wall is absent in:
- (a) Capillary
 - (b) Arteriole
 - (c) Venule
 - (d) Vein
- (ii) On which day of the menstrual cycle does ovulation take place?
- (a) 1st day
 - (b) 5th day
 - (c) 14th day
 - (d) 28th day

- (iii) Ganong's Potometer is used to study:
- (a) Photosynthesis
 - (b) Rate of uptake of water
 - (c) Exosmosis
 - (d) Guttation
- (iv) The number of chromosomes in a human skin cell are:
- (a) 22
 - (b) 23
 - (c) 44
 - (d) 46
- (v) Cretinism and Myxedema are due to:
- (a) Hypersecretion of thyroxine
 - (b) Hypersecretion of growth hormone
 - (c) Hyposecretion of thyroxine
 - (d) Hypersecretion of growth hormone
- (vi) Light dependent phase of photosynthesis in green leaves takes place in:
- (a) Grana of chloroplast
 - (b) Stroma of chloroplast
 - (c) Nucleus of palisade cells
 - (d) Cytoplasm of palisade cells
- (vii) An example of a biodegradable substance is:
- (a) Aluminium
 - (b) Paper
 - (c) Plastic
 - (d) Steel

- (viii) The part that is cut in Vasectomy is:
- (a) Urethra
 - (b) Oviduct
 - (c) Fallopian tube
 - (d) Vas deferens
- (ix) Gestation period of human foetus is:
- (a) 40 days
 - (b) 280 days
 - (c) 280 weeks
 - (d) 40 months
- (x) The part of the human eye where the rods and cones are located is:
- (a) Iris
 - (b) Retina
 - (c) Sclera
 - (d) Choroid
- (xi) Organ of Corti is present in:
- (a) Utriculus
 - (b) Sacculus
 - (c) Cochlea
 - (d) Incus
- (xii) The outermost covering of the brain is:
- (a) Arachnoid
 - (b) Piamater
 - (c) Pericardium
 - (d) Duramater

- (xiii) Cytokinins are predominantly present in:
- (a) Meristematic tissues
 - (b) Permanent tissues
 - (c) Endodermis
 - (d) Epidermis
- (xiv) Marine fish when placed in tap water bursts because of:
- (a) Diffusion
 - (b) Plasmolysis
 - (c) Endosmosis
 - (d) Exosmosis
- (xv) Urine is carried from kidney to urinary bladder by:
- (a) Uterus
 - (b) Urethra
 - (c) Umbilical cord
 - (d) Ureter

Answers : Specimen 2023

I a ii c iii b iv d v c vi a vii b viii d ix b x b
xi c xii d xiii a xiv c xv d

ICSE SEMESTER 2 EXAMINATION
SPECIMEN QUESTION PAPER
BIOLOGY
(SCIENCE PAPER 3)

Maximum Marks: 40

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) A muscular wall is absent in:
- (a) Capillary
 - (b) Vein
 - (c) Venule
 - (d) Arteriole
- (ii) The outermost layer of meninges:
- (a) Piamater
 - (b) Arachnoid layer
 - (c) Grey matter
 - (d) Duramater

- (iii) Tear gland is also called:
- (a) Gastric gland
 - (b) Lacrimal gland
 - (c) Salivary gland
 - (d) Sebaceous gland
- (iv) Which one of the following is not a simple reflex?
- (a) Coughing
 - (b) Blinking
 - (c) Eating
 - (d) Swallowing
- (v) Loop of Henle lies in:
- (a) Medulla
 - (b) Cortex
 - (c) Pelvis
 - (d) Ureter
- (vi) The pigment that gives colour to urine:
- (a) Haemoglobin
 - (b) Chlorophyll
 - (c) Urochrome
 - (d) Melanin
- (vii) The number of spinal nerves in humans:
- (a) 12 pairs
 - (b) 23 pairs
 - (c) 31 pairs
 - (d) 10 pairs

(viii) The mineral element needed for the functioning of the Thyroid gland:

- (a) Sodium
- (b) Potassium
- (c) Magnesium
- (d) Iodine

(ix) The part of the brain concerned with memory:

- (a) Cerebrum
- (b) Cerebellum
- (c) Pons
- (d) Medulla Oblongata

(x) The pigmented circular area seen in front of the eye:

- (a) Cornea
- (b) Lens
- (c) Iris
- (d) Ciliary muscles

Answers : Specimen 2022 Semester 2

I a ii d iii b iv c v a vi c vii c viii d ix a x c

ICSE SEMESTER 1 EXAMINATION
SPECIMEN QUESTION PAPER
BIOLOGY
SCIENCE Paper – 3

Maximum Marks: 40

Time allowed: One hour (inclusive of reading time)

ALL QUESTIONS ARE COMPULSORY

The marks intended for questions are given in brackets [].

Select the correct option for each of the following questions.

SECTION I (15 Marks)

Question 1

Name the following by choosing the correct option:

[5]

- (a) A pair of corresponding chromosomes of the same shape and size but one from each parent.
1. Autosomes
 2. Sex chromosomes
 3. Homologous chromosomes
 4. Analogous chromosomes
- (b) The factor that does not affect the rate of transpiration.
1. Intensity of light
 2. Velocity of wind
 3. Carbon dioxide
 4. Oxygen
- (c) Movement of molecules of a substance from their higher concentration to lower concentration when they are in direct contact.
1. Diffusion
 2. Endosmosis
 3. Imbibition
 4. Active transport

- (d) The complex molecule consisting of a DNA strand and a core of histones.
1. Centrosome
 2. Nucleotide
 3. Nucleosome
 4. Chromosome
- (e) The solvent used to dissolve the chlorophyll pigment while testing a leaf for starch.
1. Soda lime
 2. Carboic acid
 3. Methylated spirit
 4. Water

Question 2

Complete the following statements by choosing the appropriate option for each blank: [5]

- (a) During Meiosis _____ daughter cells are formed.

1. 4
2. 2
3. 8
4. 6

- (b) Wooden doors swell up during the rainy season due to _____.

1. Osmosis
2. Diffusion
3. Imbibition
4. Transpiration

- (c) The semi permeable membrane in a plant cell is the _____.

1. Cell wall
2. Cell membrane
3. Tonoplast
4. None of the above

(d) Guttation takes place through_____.

1. Stomata
2. Lenticels
3. Cuticle
4. Hydathodes

(e) A plant with variegated leaves is _____.

1. Coleus
2. Lotus
3. Peepal
4. Mango



Answers : Specimen 2022 Semester 1

1a 3 1b 4 1c 1 1d 3 1e 3

2a 1 2b 3 2c 2 2d 4 2e 1

BIOLOGY
(SCIENCE PAPER – 3)

Maximum Marks: 80

Time allowed: Two hours

1. *Answers to this Paper must be written on the paper provided separately.*
 2. *You will **not** be allowed to write during first 15 minutes.*
 3. *This time is to be spent in reading the question paper.*
 4. *The time given at the head of this Paper is the time allowed for writing the answers.*
-
5. *Section A is compulsory. Attempt any four questions from Section B.*
 6. *The intended marks for questions or parts of questions are given in brackets [].*

Instruction for the Supervising Examiner

Kindly read aloud the Instructions given above to all the candidates present in the Examination Hall.

This paper consists of 16 printed pages.

SECTION A (40 Marks)

(Attempt all questions from this Section.)

Question 1

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

[15]

(Do not copy the questions, write the correct answer only).

- (i) Four friends **P, Q, R** and **S** were discussing the examples of genetic disorders.

The examples they quoted were as follows:

P. Colour blindness and Malaria

Q. Albinism and Cholera

R. Haemophilia and Colour blindness

S. Haemophilia and Albinism

Who gave the correct examples?

(a) P and Q

(b) R and S

(c) P and R

(d) Q and S

- (ii) During the ventricular systole, the atrioventricular valves (P) _____ and the semilunar valves (Q) _____.

(a) P – close and Q – open

(b) P – close and Q – close

(c) P – open and Q – close

(d) P – open and Q – open

(iii) **Assertion (A):** A thick cuticle reduces transpiration by acting as a barrier.

Reason (R): Desert plants have large, thin leaves for transpiration.

- (a) (A) is true and (R) is false.
- (b) (A) is false and (R) is true.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

(iv) A sequence of DNA has 300 nitrogenous base pairs, of which 75 are Guanine.

What is the number of Thymine in this sequence?

- (a) 150
- (b) 100
- (c) 50
- (d) 75

(v) **Assertion (A):** Abscisic acid promotes stomatal closure during a drought.

Reason (R): Abscisic acid helps the plant to conserve water during stress.

- (a) (A) is true and (R) is false.
- (b) (A) is false and (R) is true.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

- (vi) **Assertion(A):** Leukoderma is the biological term for blood cancer.
Reason(R): An abnormal increase in the number of WBCs causes blood cancer.
- (a) (A) is true and (R) is false.
(b) (A) is false and (R) is true.
(c) Both (A) and (R) are true and (R) is the correct explanation of (A).
(d) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (vii) A health organisation wants to educate the rural audience about population control using visually engaging methods. Which of these would be effective?
- P.** Posters
Q. Loudspeakers
R. Film shows
S. Street plays
- (a) P, R and S
(b) Q, R and S
(c) P, Q and R
(d) P, Q and S
- (viii) A family has a history of colour blindness. During a genetic testing, it was found that the mother is a carrier of colour blindness ($X^C X$) and the father has normal vision (XY). What is the probability of their sons being colour blind?
- (a) 25%
(b) 50%
(c) 75%
(d) 0%

- (ix) Bharat woke up late in the morning and missed the school bus.



This situation stimulated the nerves of the sympathetic system which resulted in:

- (a) Constriction of Coronary arteries
 - (b) Muscle relaxation
 - (c) Decrease in Respiration rate
 - (d) Bronchodilation
- (x) Which is the correct sequence of blood flow in the Pulmonary and Systemic Circulation?
- (a) Right Atrium → Right Ventricle → Lungs → Left Atrium → Left Ventricle → Body tissues
 - (b) Left Ventricle → Left Atrium → Body tissues → Right Atrium → Right Ventricle → Lungs
 - (c) Left Ventricle → Left Atrium → Lungs → Right Ventricle → Right Atrium → Body tissues
 - (d) Right Atrium → Right Ventricle → Body tissues → Left Atrium → Left Ventricle → Lungs

- (xi) Karan was standing on a high stool and cleaning the ceiling fan.



He suddenly loses balance and sustains a head injury. An examination reveals that his pupils have lost the capacity to constrict in bright light. Which structure has been damaged?

- (a) Suspensory ligaments
(b) Medulla oblongata
(c) Eye lens
(d) Eye lid
- (xii) A person suffering from kidney failure has proteins in the urine. What is this condition called?
- (a) Haematuria
(b) Glycosuria
(c) Albuminuria
(d) Anaemia
- (xiii) What does *Swachh Bharat Abhiyan* aim to achieve in India?
- (a) Increase in deforestation to dump waste.
(b) Expansion of landfill areas to accommodate more waste.
(c) Improved sanitation and solid waste management.
(d) Greater industrial waste production.

(xiv) Varun's mother added plenty of salt to the mango pickle she made. This is to:

- A. enhance the colour of the pickle.
- B. inhibit the growth of microorganisms.
- C. increase the nutritional value.
- D. create a hypertonic solution.

(a) A and C

(b) B and C

(c) C and D

(d) B and D

(xv) During which phase of menstrual cycle does the endometrium shed?

(a) Follicular phase

(b) Ovulatory phase

(c) Menstrual phase

(d) Luteal phase

Answers : Past Year Paper 2026

I b ii a iii a iv d v c vi b vii a viii b ix d x a
xi b xii c xiii c xiv d xv c

BIOLOGY
(SCIENCE PAPER – 3)

Maximum Marks: 80

Time allowed: Two hours

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3. *This time is to be spent in reading the question paper.*
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5. *Section A is compulsory. Attempt any four questions from Section B.*
6. *The intended marks for questions or parts of questions are given in brackets [].*

Instruction for the Supervising Examiner

Kindly read aloud the Instructions given above to all the candidates present in the Examination Hall.

This paper consists of 15 printed pages and 1 blank page.

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Turn Over

SECTION A (40 Marks)

(Attempt all questions from this Section.)

Question 1

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

[15]

(Do not copy the questions, write the correct answer only).

- (i) _____ is the result of inward movement of water molecules.
- (a) Plasmolysis
 - (b) Flaccidity
 - (c) Exosmosis
 - (d) Deplasmolysis
- (ii) Which of the following is an example of a natural reflex?
- (a) Sneezing
 - (b) Applying brakes
 - (c) Giving a hand signal
 - (d) Playing an instrument
- (iii) A newly married couple are expecting their first child. What is the probability of them having a daughter?
- (a) 10%
 - (b) 50%
 - (c) 75%
 - (d) 100%

(iv) **Assertion (A):** Veins starting from the intestines do not open directly into the inferior vena cava.

Reason (R): They unite and enter the liver as hepatic portal vein.

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

(v) The structure absent in a nerve cell is:

- (a) Nucleus
- (b) Centrosome
- (c) Cytoplasm
- (d) Neurilemma

(vi) The number of chromosomes in the somatic cells of a human body **before** mitosis and **after** mitosis is:

- (a) 23, 23
- (b) 26, 46
- (c) 23, 46
- (d) 46, 46

(vii) The inorganic constituent of urine is:

- (a) Ammonia
- (b) Urea
- (c) Creatinine
- (d) Uric acid

(viii) **Assertion (A):** Darwin preferred pea plants for his experiments on genetics as it is a unisexual plant.

Reason (R): Pea plants are normally self-pollinated.

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

(ix) Anup participated in a marathon race and felt dehydrated by the end of the race. The human body has mechanisms to conserve water and prevent dehydration. Which part of the *nephron* is primarily responsible for the reabsorption of water to prevent dehydration?

- 1. Glomerulus
- 2. Proximal Convoluted Tubule
- 3. Loop of Henle
- 4. Distal Convoluted Tubule

- (a) 3
- (b) 2 and 3
- (c) 1, 2 and 3
- (d) 2, 3 and 4

(x) Which of the following process occurs only in meiosis and **NOT** in mitosis:

- (a) Chromosome duplication
- (b) Crossing over
- (c) Cytokinesis
- (d) Chromosome alignment

(xi) **Assertion (A):** Blood flows from the left atrium to the left ventricle of the heart.

Reason (R): The tricuspid valve separates the left atrium from the left ventricle.

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

(xii) Which adaptation is **NOT** associated with desert plants to minimise water loss through transpiration?

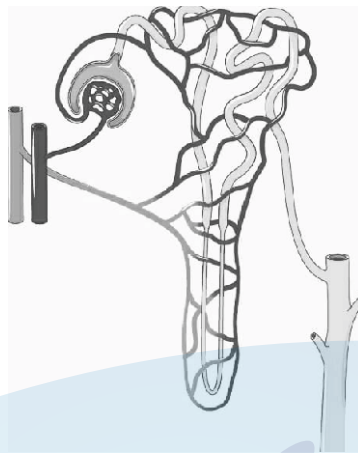
- (a) Reduced number of stomata
- (b) Thick, waxy cuticle
- (c) Deep root systems
- (d) Increased leaf surface area

(xiii) **Assertion (A):** Spraying of pesticides and insecticides can cause water pollution.

Reason (R): Pesticides and insecticides are non-biodegradable agricultural wastes.

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

- (xiv) The diagram given below represents a nephron. Ultrafiltration of blood occurs in:



- (a) Bowman's capsule
(b) Glomerulus
(c) Proximal Convoluted Tubule
(d) Loop of Henle
- (xv) Which of the following statements are correct?
- P. Night blindness is caused by the deficiency of Vitamin A.
Q. Utriculus gives dynamic balance to the body.
R. Neuron is a single cell.
S. Fossil fuels are inexhaustible sources of energy.
- (a) Q and S
(b) R and S
(c) P and Q
(d) P and R

Answers : Past Year Paper 2025 Improvement

i d ii a iii b iv c v b vi d vii a viii b ix d x b
xi a xii d xiii c xiv b xv d

BIOLOGY
(SCIENCE PAPER – 3)

Maximum Marks: 80

Time allowed: Two hours

- 1. Answers to this Paper must be written on the paper provided separately.*
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- 4. The time given at the head of this Paper is the time allowed for writing the answers.*
- 5. Section A is compulsory. Attempt any four questions from Section B.*
- 6. The intended marks for questions or parts of questions are given in brackets [].*

Instruction for the Supervising Examiner

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Turn Over

SECTION A (40 Marks)

(Attempt all questions from this Section.)

Question 1

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

[15]

(Do not copy the questions, write the correct answer only).

- (i) The number of live births per thousand people per year is called:
- (a) Mortality
 - (b) Population density
 - (c) Population growth rate
 - (d) Natality
- (ii) The structure that lies at the junction of the choroid and the iris and is itself a part of the choroid is called:
- (a) Ciliary body
 - (b) Suspensory ligament
 - (c) Pupil
 - (d) Lens
- (iii) **Assertion (A):** Seminal vesicles pour an alkaline secretion into the semen as it passes through the ureter.

Reason (R): The female vagina is acidic and needs to be neutralized for sperm survival.

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

- (iv) The hormone that induces vigorous contractions of the uterus in a pregnant mother is:
- (a) Oestrogen
 - (b) Prolactin
 - (c) Oxytocin
 - (d) Progesterone
- (v) A scientist wanted to conduct a genetic experiment on mice. He cut the tails of all the mice and made them reproduce. What will be the phenotype of the offsprings?
- (a) All the offsprings will be tailless.
 - (b) There will be a mix of tailed and tailless offsprings.
 - (c) All the offsprings will have tails.
 - (d) Tail of the offsprings cannot be predicted.
- (vi) **Assertion (A):** A turgid plant cell is in a balanced state.
Reason (R): In a turgid cell, turgor pressure and wall pressure are equal and in the same direction.
- (a) (A) is true and (R) is false.
 - (b) (A) is false and (R) is true.
 - (c) Both (A) and (R) are true.
 - (d) Both (A) and (R) are false.

- (vii) The optimum temperature for photosynthesis is:
- (a) 10 – 15°C
 - (b) 60 – 65°C
 - (c) 40 – 45°C
 - (d) 25 – 35°C
- (viii) Ajay and Vijay are siblings. Ajay can roll his tongue while Vijay cannot. What is the genotype of their parents?
- (a) Both the parents are homozygous dominant.
 - (b) Both the parents are homozygous recessive.
 - (c) One parent is homozygous dominant, and the other is homozygous recessive.
 - (d) Both the parents are heterozygous dominant.
- (ix) **Assertion (A):** Deficiency of Antidiuretic hormone causes an increase in urination.
- Reason (R):** Antidiuretic hormone acts on the kidney to reabsorb water from the kidney tubules.
- (a) (A) is true and (R) is false.
 - (b) (A) is false and (R) is true.
 - (c) Both (A) and (R) are true.
 - (d) Both (A) and (R) are false.

- (x) A phase of cell division where the spindle fibres disappear is:
- (a) Telophase
 - (b) Prophase
 - (c) Metaphase
 - (d) Anaphase
- (xi) **Assertion(A):** Arachnoid layer helps in speeding up the transmission of nerve impulses along the axons.
- Reason(R):** Axon endings at the synapse secrete acetylene.
- (a) (A) is true and (R) is false.
 - (b) (A) is false and (R) is true.
 - (c) Both (A) and (R) are true.
 - (d) Both (A) and (R) are false.
- (xii) Many nuclear power plants are constructed near water sources. They use water for cooling their machinery and release it back into the water stream. Identify the kind of pollution caused.
- (a) Radiation pollution
 - (b) Water pollution
 - (c) Industrial pollution
 - (d) Thermal pollution

(xiii)



Owls are nocturnal animals. They are active at night and hunt small animals for food. Owls have large eyes and can see well at night. This is due to:

- (a) Cones and Rhodopsin
- (b) Rods and Iodopsin
- (c) Rods and Rhodopsin
- (d) Cones and Iodopsin

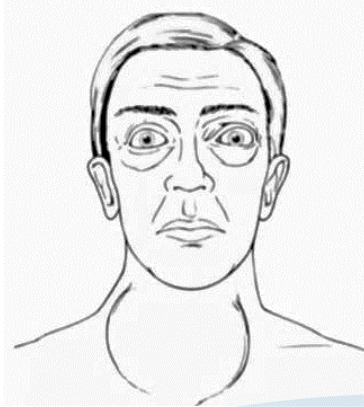
(xiv) Sunil tried to match the tropic movements in plants with the stimulus they respond to. The tabulation is given below:

	Tropism	Stimulus
P	Thigmotropism	Touch
Q	Geotropism	Water
R	Chemotropism	Chemicals
S	Phototropism	Gravity

Identify the correct pair:

- (a) P and R
- (b) Q and S
- (c) R and S
- (d) P and S

(xv) Observe the following picture, identify the *defect* and the cause of the defect.



- (a) Simple goitre, under secretion of thyroxine.
- (b) Ex-ophthalmic goitre, over secretion of thyroxine.
- (c) Simple goitre, over secretion of thyroxine.
- (d) Ex-ophthalmic goitre, under secretion of thyroxine.

Answers : Past Year Paper 2025

i d ii a iii b iv c v c vi a vii d viii d ix c x a
xi d xii d xiii c xiv a xv b

2024

BIOLOGY

(SCIENCE PAPER – 3)

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 (40 Marks)

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

Question 1

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

[15]

(Do not copy the questions, write the correct answer only).

- (i) Duplicated chromosomes are joined at a point termed:
- (a) Centrosome
 - (b) Centromere
 - (c) Centriole
 - (d) Chromatid
- (ii) The process of conversion of ADP to ATP during photosynthesis is called:
- (a) Photolysis
 - (b) Phagocytosis
 - (c) Photophosphorylation
 - (d) Polymerisation

This paper consists of 11 printed pages and 1 blank page.

T24 523

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Turn Over

- (iii) The process in which water is lost from the margins of strawberry leaves is:
- (a) Osmosis
 - (b) Imbibition
 - (c) Diffusion
 - (d) Guttation
- (iv) The hormone that affects urination is:
- (a) Adrenaline
 - (b) Vasopressin
 - (c) Oestrogen
 - (d) Thyroxine
- (v) Which one of the following helps in the opening of stomata:
- (a) Cobalt ions
 - (b) Potassium ions
 - (c) Magnesium ions
 - (d) Aluminium ions
- (vi) A zygote which has Y chromosome inherited from the father will develop into a:
- (a) Will depend on the chromosome inherited from the mother
 - (b) Girl
 - (c) Either boy or a girl
 - (d) Boy
- (vii) The ear ossicle that transports sound vibrations to the inner ear:
- (a) Stapes
 - (b) Malleus
 - (c) Incus
 - (d) Cochlea

(viii) If a person has a heart attack, what must be done immediately?

- P.** Loosen his/her clothing
- Q.** Make him/her lie down in an airy room
- R.** Rush him/her to the hospital
- S.** Engage him/her in a conversation

- (a) **P** and **Q**
- (b) **P** and **S**
- (c) **R** and **S**
- (d) **P, Q** and **R**

(ix) Adjusting the focal length of the eye lens to view objects at different distances is done by:

- (a) Cornea
- (b) Iris
- (c) Ciliary muscles
- (d) Sclera

(x) Four friends **P, Q, R** and **S** were discussing the examples of genetic disorders. The examples they quoted were as follows:

- P.** Colour blindness and Malaria
- Q.** Albinism and Cholera
- R.** Haemophilia and Colour blindness
- S.** Haemophilia and Albinism

Who gave the correct examples?

- (a) **P** and **Q**
- (b) **R** and **S**
- (c) **P** and **R**
- (d) **Q** and **S**

- (xi) Osmosis takes place when there is:
- (a) A freely permeable membrane
 - (b) A cell wall
 - (c) A selectively permeable membrane
 - (d) An impermeable membrane
- (xii) A male gorilla has 48 chromosomes in each of its body cells. How many chromosomes will each of the sperms have?

- (a) 24
- (b) 48
- (c) 12
- (d) 16



- (xiii) **Assertion (A):** Sympathetic nervous system prepares the body for violent action against abnormal conditions.

Reason (R): Sympathetic nervous system accelerates heartbeat.

Which of the following is correct?

- (a) Both A and R are True
 - (b) A is True, R is False
 - (c) A is False but R is True
 - (d) Both A and R are False
- (xiv) Birth rate is the number of live births per thousand persons in:
- (a) 1 year
 - (b) 2 years
 - (c) 10 years
 - (d) 20 years

(xv) Industrial Melanism was observed in:

- (a) Mice
- (b) Peppered Moth
- (c) House Flies
- (d) Crow



Answers : Past Year Paper 2024

I b ii c iii d iv b v b vi d vii a viii d ix c x b
xi c xii a xiii a xiv a xv b

BIOLOGY
(SCIENCE PAPER – 3)

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 (40 Marks)

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

Question 1

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

[15]

(Do not copy the questions, write the correct answer only).

- (i) The sex chromosome in a human ovum is:
- (a) X chromosome
 - (b) Y chromosome
 - (c) Both X and Y chromosomes
 - (d) Either X or Y chromosome

This paper consists of 11 printed pages and 1 blank page.

- (ii) Which one of the following is a biodegradable waste?
- (a) Metal cans
 - (b) E-waste
 - (c) Plastic
 - (d) Flowers
- (iii) The heart sound 'Dup' is produced when:
- (a) Semilunar valves open
 - (b) Atrio ventricular valves close
 - (c) Semilunar valves close
 - (d) Atrio ventricular valves open
- (iv) Deplasmolysis occurs when a plasmolysed cell is placed in:
- (a) Concentrated salt solution
 - (b) Tap water
 - (c) Concentrated sugar solution
 - (d) Hypertonic salt solution
- (v) Alpha cells of Pancreas secrete:
- (a) Glycogen
 - (b) Glucose
 - (c) Glucagon
 - (d) Insulin
- (vi) Haploid number of chromosomes are found in:
- (a) Nephrons
 - (b) Neurons
 - (c) Skin cells
 - (d) Sperms

- (vii) The life span of an RBC is:
- (a) 120 days
 - (b) 220 days
 - (c) 20 days
 - (d) 2 weeks
- (viii) The statistical study of human population is called:
- (a) Mortality
 - (b) Demography
 - (c) Natality
 - (d) Equality
- (ix) The pale yellow colour of normal human urine is due to the pigment:
- (a) Melanin
 - (b) Anthocyanin
 - (c) Urochrome
 - (d) Haemoglobin
- (x) Stimulation of the nerves of the sympathetic nervous system:
- (a) Accelerates heartbeat
 - (b) Constricts pupil of eyes
 - (c) Increases peristalsis
 - (d) Retards heartbeat
- (xi) The site of light reaction in the cells of a green leaf is:
- (a) Nucleus
 - (b) Grana of chloroplast
 - (c) Cytoplasm
 - (d) Stroma of chloroplast

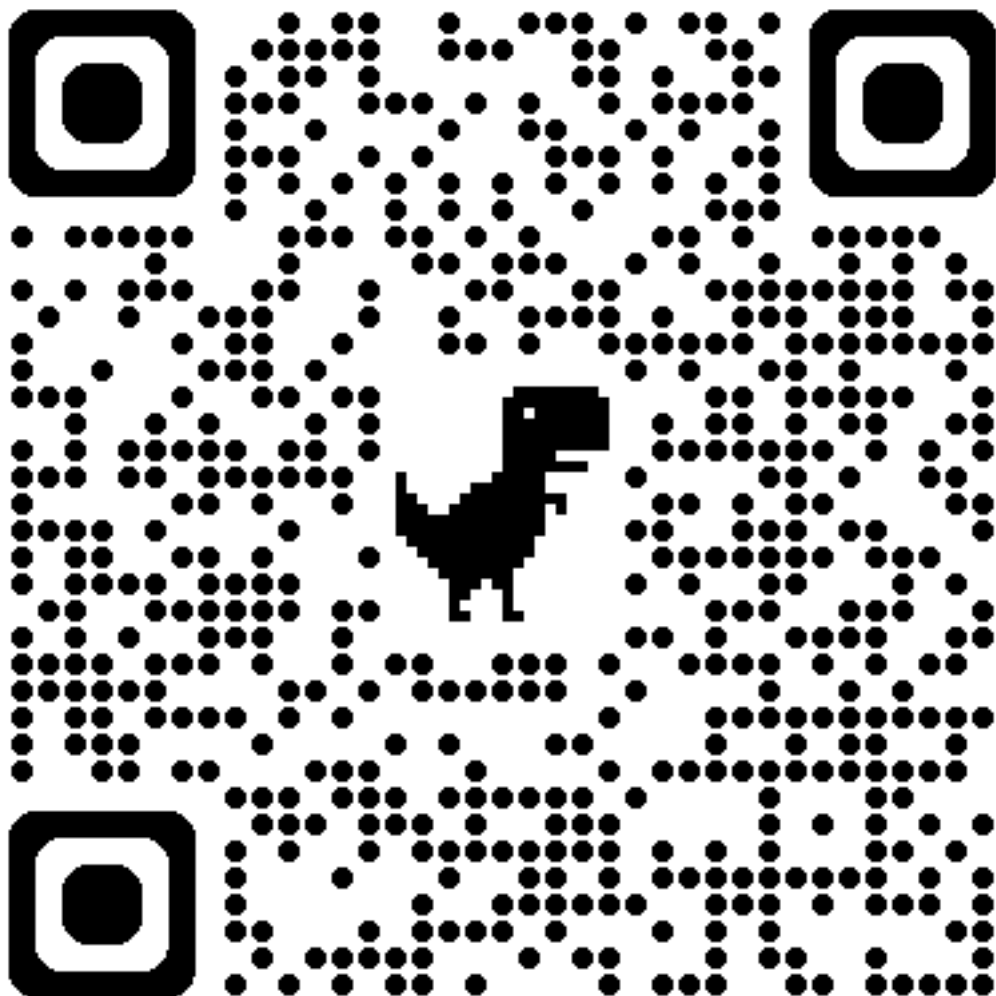
- (xii) The paper used to demonstrate unequal transpiration in a dicot leaf is:
- (a) Filter paper
 - (b) Litmus paper
 - (c) Starch paper
 - (d) Cobalt chloride paper
- (xiii) Vitreous humour is present between:
- (a) Cornea and Iris
 - (b) Lens and Retina
 - (c) Iris and Lens
 - (d) Cornea and Lens
- (xiv) Oxygenated blood to liver is supplied by:
- (a) Hepatic artery
 - (b) Hepatic vein
 - (c) Inferior venacava
 - (d) Hepatic portal vein
- (xv) During the synthesis phase of the cell cycle, more of:
- (a) RNA is synthesised
 - (b) RNA and proteins are synthesised
 - (c) DNA is synthesised
 - (d) Glucose is synthesized

Answers : Past Year Paper 2023

I a ii d iii c iv b v c vi d vii a viii b ix c x a
xi b xii d xiii b xiv a xv c

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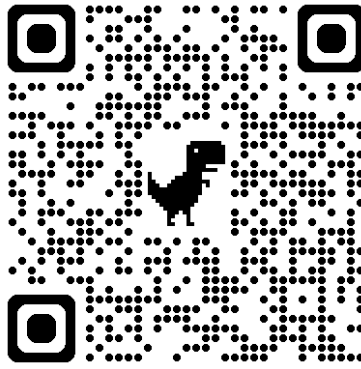


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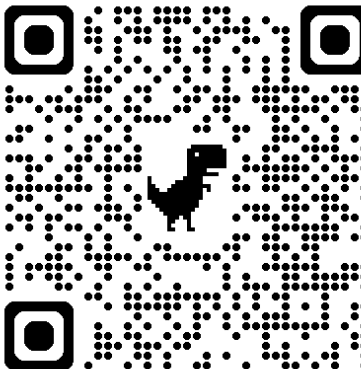
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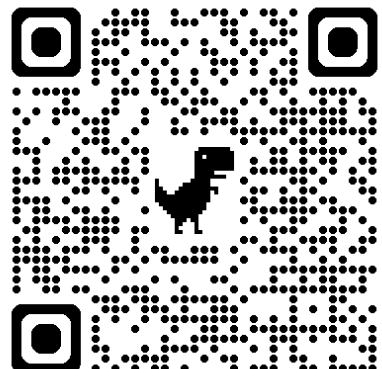
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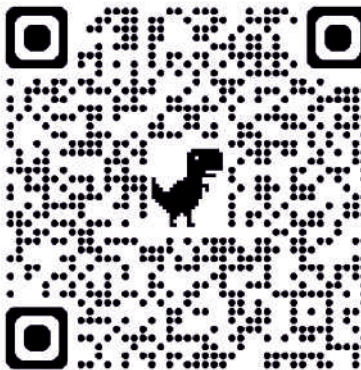
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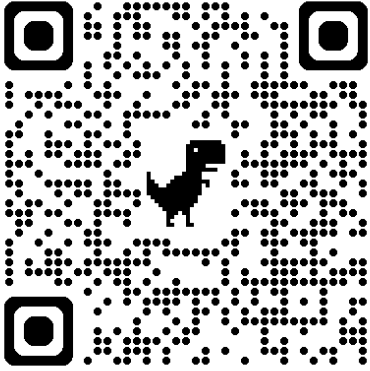
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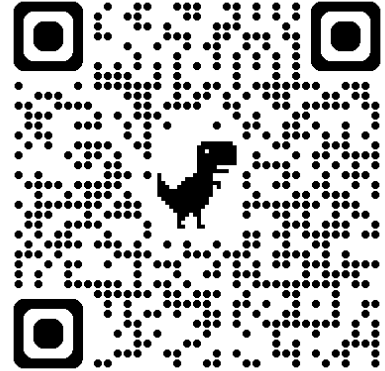
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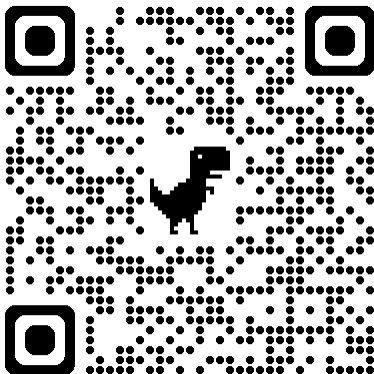
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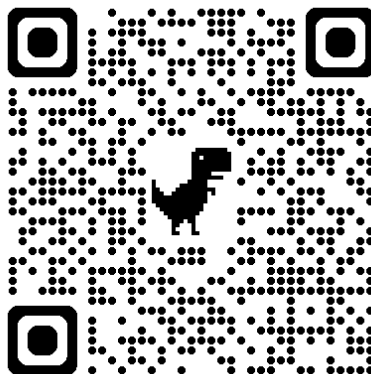
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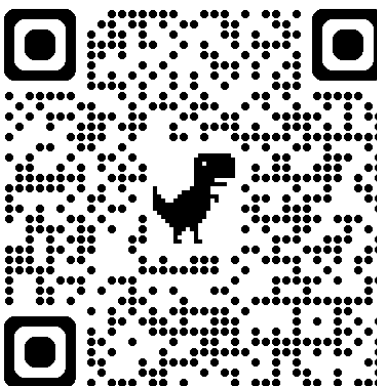
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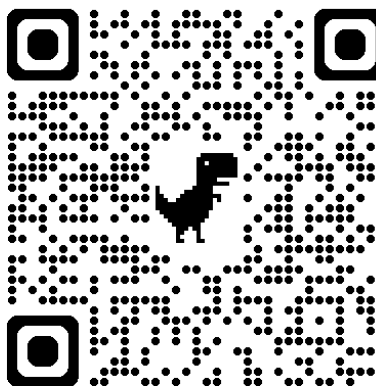
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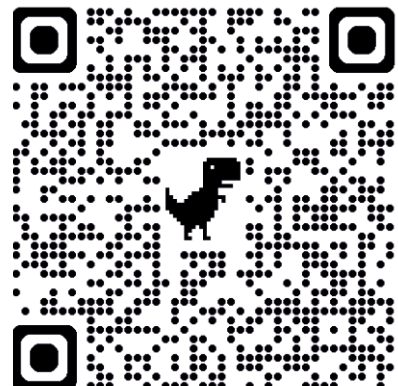
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