

# BOARD OF INTERMEDIATE & SECONDARY EDUCATION GUJRANWALA

## BIOLOGY — EXAMINER’S ANALYTICAL REPORT

10th Grade • Annual Examination 2026 • Objective Paper Code 7461

| Report Particulars   | Details                                                                                                                |
|----------------------|------------------------------------------------------------------------------------------------------------------------|
| Examination          | 10th Grade Biology — Annual Examination 2026                                                                           |
| Report Type          | Examiner’s Report (Question-wise) and Crux of Examiner’s Report                                                        |
| Objective Paper Code | 7461                                                                                                                   |
| Examiner             | Jamshed Iqbal, SSS                                                                                                     |
| Institution          | Govt. Higher Secondary School, Ladheywala Warreich, GRW                                                                |
| Date                 | 24 July 2026                                                                                                           |
| Basis                | Examiner’s experience and general observation; detailed question-wise evaluation of the BISE Gujranwala question paper |

Visual charts are based only on figures and observations explicitly stated in the report.

### 1. Objective Portion — Difficulty Distribution

|          |                                                                                     |        |
|----------|-------------------------------------------------------------------------------------|--------|
| Easy     |  | 9 / 12 |
| Moderate |  | 3 / 12 |

### 2. Objective Portion — Cognitive Level

|                         |                                                                                     |         |
|-------------------------|-------------------------------------------------------------------------------------|---------|
| Knowledge / remembering |  | 12 / 12 |
|-------------------------|-------------------------------------------------------------------------------------|---------|

### 3. Overall Observation — Reported Causes of Mark Loss

|   |                                                  |   |
|---|--------------------------------------------------|---|
| 1 | Incomplete answers                               | ● |
| 2 | Incorrect biological terminology                 | ● |
| 3 | Wrong spellings of technical words               | ● |
| 4 | Lack of differentiation between related concepts | ● |
| 5 | Insufficient detail in long questions            | ● |
| 6 | No labelled diagram where structure was required | ● |

## 1. Executive Summary

The examiner's report presents a detailed question-wise analysis of the 10th Grade Biology Annual Examination 2026. The objective paper consisted predominantly of Knowledge/Remembering-level MCQs, with difficulty ranging from easy to moderate. The MCQs covered all textbook chapters, while only one MCQ was selected from the exercise section. The subjective portion provided broad chapter coverage and an overall moderate level of difficulty.

At student-performance level, the report indicates that candidates generally demonstrated stronger performance where questions required direct recall, definitions or straightforward textbook knowledge. Recurrent areas of mark loss included incomplete answers, incorrect biological terminology, spelling errors in technical terms, failure to differentiate related concepts, insufficient detail in long answers, and omission of labelled diagrams where structural representation was required.

At assessment level, the examiner recommends greater emphasis on conceptual clarity, thought-provoking MCQs, and short and long questions that encourage students to formulate personal responses rather than reproduce textbook content.

## 2. Examination & Reporting Context

The examiner notes that marking in Biology is conducted on a 100% exchange basis with other boards and that the report is based on the examiner's experience and general observations. The question paper of BISE Gujranwala was separately analysed, and the detailed question-wise observations are appended in the examiner's report.

## 3. Objective Portion — Overall Analysis

- Almost all MCQs were at the Knowledge/Remembering cognitive level.
- The difficulty level of the MCQs was mostly Easy to Moderate.
- Out of 12 MCQs, only one was selected from the MCQs given in the exercise.
- The stems of almost all MCQs were direct statements taken from the textbook.
- The selection of MCQs covered all chapters of the textbook, ensuring balanced distribution of marks.

## 4. Objective Portion — Question-wise Analysis

| Question | Correct Option / Answer | Cognitive Level | Difficulty | Principal Learning Issue Identified                                                                                               |
|----------|-------------------------|-----------------|------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Q.1      | Emphysema               | Knowledge       | Easy       | Students confused airway inflammation, bronchial disease and alveolar destruction; some lacked knowledge of respiratory diseases. |
| Q.2      | Hilus                   | Knowledge       | Moderate   | Students showed confusion among kidney anatomical terms, including loci, renal cortex and hilum.                                  |
| Q.3      | Neuron                  | Knowledge       | Easy       | Students confused a part of the neuron with the complete structural and functional unit of the nervous system.                    |

|      |              |           |          |                                                                                                                   |
|------|--------------|-----------|----------|-------------------------------------------------------------------------------------------------------------------|
| Q.4  | Sternum      | Knowledge | Easy     | Students confused the sternum with vertebral column, vertebrae or hyoid bone and their anatomical locations.      |
| Q.5  | Cloning      | Knowledge | Easy     | Students confused different forms of asexual reproduction with modern artificial vegetative propagation.          |
| Q.6  | Maize        | Knowledge | Moderate | Students showed weak distinction between epigeal and hypogeal germination and their examples.                     |
| Q.7  | 1953         | Knowledge | Easy     | Some students confused historical milestones in genetics and DNA research or could not recall the exact year.     |
| Q.8  | Allele       | Knowledge | Easy     | Students confused allele with locus, translation and nucleosome.                                                  |
| Q.9  | Tiger        | Knowledge | Easy     | Students confused producers, herbivores and higher-level consumers within the food chain.                         |
| Q.10 | Commensalism | Knowledge | Moderate | Students confused commensalism with mutualism, parasitism and predation.                                          |
| Q.11 | 1990         | Knowledge | Easy     | Students confused different milestones in genome research, including the launching and completion of the project. |
| Q.12 | Mushroom     | Knowledge | Easy     | Students confused naturally occurring psychoactive compounds and their biological sources.                        |

## 5. Subjective Portion — Overall Analysis

- The subjective portion provided almost equal coverage of all chapters, ensuring balanced distribution of marks.
- More short questions were selected from chapters excluded from the long-question selection and vice versa.
- The overall difficulty level was Moderate.
- Most questions were from past question papers of all boards.
- Long questions were well structured with respect to allocation of marks.
- Where some ambiguity was found, it was addressed through marking instructions.

## 6. Question 2 — Short Answers

| Part | Question                                                            | Examiner Observation                                                                                                                    |
|------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| i    | Why does smoking affect social life?                                | Most candidates identified harmful effects of smoking but many did not specifically relate them to social relationships and acceptance. |
| ii   | What is double pneumonia?<br>Write the name of bacteria causing it. | Majority defined double pneumonia correctly; many wrote incorrect scientific names or misspelled <i>Streptococcus pneumoniae</i> .      |
| iii  | Differentiate between nasal cavity and nostrils.                    | Good responses gave two clear distinguishing points; average candidates provided definitions without comparison.                        |
| iv   | What is glomerular filtrate?                                        | Most knew it is the fluid filtered into Bowman's Capsule through pressure filtration; some confused it with urine.                      |

|      |                                        |                                                                                                                           |
|------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| v    | Define osmosis and write one example.  | Definitions were generally satisfactory; examples were often incomplete or inappropriate.                                 |
| vi   | What is meant by lithotripsy?          | Better candidates identified shock waves used to break kidney stones; some confused it with surgical removal.             |
| vii  | Why can owl not see in daylight?       | Most referred to cone deficiency or rod dominance; some incorrectly stated that owls are completely blind during the day. |
| viii | What is paralysis? Write two symptoms. | Definition was generally correct; students often wrote causes instead of symptoms.                                        |

## 7. Question 3 — Short Answers

| Part | Question                                                      | Examiner Observation                                                                                        |
|------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| i    | What is endoskeleton?                                         | Most answered correctly; some confused endoskeleton with vertebral column.                                  |
| ii   | Differentiate between elastic and fibrous cartilage.          | High achievers covered fibres, flexibility and location; weak candidates gave only one point.               |
| iii  | How does binary fission take place in unicellular eukaryotes? | Many described simple cell division but omitted nuclear division.                                           |
| iv   | What is seed coat? Write down its functions.                  | Definition was generally correct; functions were often incomplete.                                          |
| v    | What is meant by grafting?                                    | Generally understood as vegetative propagation; some confused grafting with budding.                        |
| vi   | What is meant by Homozygous and Heterozygous genotype?        | Good responses included allele combinations and examples; some mixed genotype with phenotype.               |
| vii  | Define traits.                                                | Most candidates answered satisfactorily.                                                                    |
| viii | What is dihybrid cross?                                       | Better candidates referred to inheritance of two contrasting traits; average responses were overly general. |

## 8. Question 4 — Short Answers

| Part | Question                                                | Examiner Observation                                                                          |
|------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| i    | Define producers.                                       | Most students answered correctly.                                                             |
| ii   | Differentiate between secondary and tertiary consumers. | Better candidates used examples; some confused food-chain levels.                             |
| iii  | What is meant by trophic level?                         | Generally well attempted; some confused trophic level with food chain.                        |
| iv   | What is pyramid of numbers?                             | Majority answered correctly. Diagrams were unnecessary but acceptable.                        |
| v    | Write two important objectives of Genetic Engineering.  | Many students wrote achievements instead of objectives.                                       |
| vi   | Define plasmid.                                         | Most correctly identified plasmids as circular DNA; some incorrectly called them chromosomes. |
| vii  | What is iodine tincture? Write down its use.            | Most knew it and its antiseptic use; some confused it with antibiotics.                       |
| viii | Write two narcotics obtained from opium.                | Most wrote Morphine and Codeine correctly; a few incorrectly included heroin.                 |

## 9. Section-II — Long Questions

| Question | Question Statement                                                                      | Examiner Observation                                                                                                                                                                                                 |
|----------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q.5(a)   | Explain the mechanism of breathing.                                                     | High achievers explained inspiration and expiration separately and drew a labelled diagram. Many omitted the role of diaphragm and intercostal muscles.                                                              |
| Q.5(b)   | Write a note on the spinal cord.                                                        | Good responses included location, structure and functions. Many ignored reflex action and nerve impulse conduction.                                                                                                  |
| Q.6(a)   | Write the functions of kidney in detail.                                                | Strong candidates discussed filtration, reabsorption, secretion and homeostasis. Weak candidates mentioned only urine formation.                                                                                     |
| Q.6(b)   | Write down the structure and function of bone.                                          | Better candidates described compact bone, spongy bone and bone marrow. Many wrote functions only.                                                                                                                    |
| Q.7(a)   | Describe any five achievements of Genetic Engineering.                                  | Most wrote five distinct achievements; some wrote insulin production and gene therapy, while a few wrote objectives instead of achievements.                                                                         |
| Q.7(b)   | Explain classification of drugs on the basis of chemical properties and mode of action. | Well attempted by most students. Many confused drug classifications with categories such as narcotics and antibiotics. Better responses classified drugs according to chemical properties with appropriate examples. |

## 10. Overall Student Performance — Consolidated Findings

- The paper effectively differentiated high-achieving students from average candidates.
- Students with good handwriting and better presentation, together with stronger remembering and reproducing ability, generally obtained good marks.
- Most mark loss resulted from incomplete answers.
- Incorrect biological terminology was a recurring issue.
- Wrong spellings of technical words contributed to loss of marks.
- Students frequently failed to differentiate between related concepts.
- Long questions were often answered without sufficient detail.
- Labelled diagrams were not provided in questions requiring the structure of an organ or system.

## 11. Assessment-Level Findings

| Area                    | Finding from Examiner's Report                                                 |
|-------------------------|--------------------------------------------------------------------------------|
| Cognitive Demand        | Almost all MCQs were Knowledge/Remembering level.                              |
| Difficulty              | MCQs were mostly Easy to Moderate; overall subjective difficulty was Moderate. |
| Textbook Alignment      | Almost all MCQ stems were direct statements taken from the textbook.           |
| Chapter Coverage        | Objective and subjective portions provided broad/equal chapter coverage.       |
| Exercise MCQs           | Only one of 12 MCQs was selected from the exercise.                            |
| Past Papers             | Most subjective questions were from past question papers of all boards.        |
| Long-Question Structure | Long questions were well structured regarding allocation of marks.             |

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| Ambiguity | Any ambiguity identified was addressed through marking instructions. |
|-----------|----------------------------------------------------------------------|

## 12. Key Areas Requiring Academic Attention

- Conceptual clarity instead of reliance on rote learning.
- Ability to distinguish between closely related biological concepts and terms.
- Accuracy in biological terminology and spelling of technical words.
- Completeness of multi-part answers.
- Ability to provide sufficient detail in long questions.
- Use of labelled diagrams where questions require structural explanation.
- Ability to respond to the exact demand of a question—for example, distinguishing objectives from achievements or symptoms from causes.
- Development of students' ability to express understanding in their own words.

## 13. Recommendations Emerging Directly from the Examiner's Report

- Review MCQ selection so that questions promote conceptual clarity and thought-provoking learning rather than predominantly rote recall.
- Frame short and long questions in ways that encourage students' personal responses and understanding instead of reproduction of textbook content.
- Provide regular classroom practice on differentiation between related concepts.
- Strengthen technical terminology and spelling through subject-specific written practice.
- Train students to address every component of a question explicitly.
- Give systematic practice in detailed long-answer writing.
- Integrate labelled-diagram practice for organs and systems wherever structurally relevant.
- Use examiner feedback as an input for future question-paper development and academic guidance.

## 14. Concluding Observation

The examiner's report indicates that the Biology Annual Examination 2026 was broadly balanced in chapter coverage and moderate in overall subjective difficulty. The central academic issue identified is not simply factual knowledge, but the ability of students to demonstrate conceptual understanding accurately, completely and independently. The report therefore calls for an assessment approach that increasingly encourages conceptual clarity, thought, differentiation, personal response and meaningful understanding while maintaining appropriate coverage of the prescribed textbook.

## 15. Examiner's Formal Remarks

The examiner specifically emphasises the need for more effort in selecting MCQs that encourage conceptual clarity and thought-provoking learning instead of rote learning. Similarly, short and long questions should be phrased to encourage students' personal responses rather than reproduction of textbook content.