Smart Syllabus / Accelerated Learning Programme (ALP) Biology Grade-12 for Academic Session 2026-27 & BISE Exam-2027

Chapter No. / Name	Excluded Topics and Exercise Questions	Page No.
13. Thermoregulation and Osmoregulation	• 13.1.1/Basic mechanism of homeostasis • 13.2.3/ Nature of Excretory Products in relation to Habitat • MCQ No. 6, 7 & 8 • Short answers No. 4 last two bullets • Long questions No. 1 & 4 • All Inquisitive Questions	1-2 7-8 32 11 12 12 12
14. Human Urinary System	• 14.3/ Disorders of Urinary Tract • MCQ No. 9 & 10 • Short answers No. 6, 7, 8 (ii & iii) • Long questions No. 5, 6 & 7 • All Inquisitive Questions	19-24 25 25 25 25
15. Human Nervous System	• Table: Twelve pairs of Cranial Nerves &their Functions • Table: effects of Autonomic Nervous System on Body Parts • 15.6/ Receptors in Human Body • 15.7/ Effects of Drugs on Nervous Coordination • 15.8/ Disorders of Nervous System • 15.9/ Diagnostic Tests for Nervous Disorders • MCQ No. 12-17 • Short answers No. 1, 2, 7-11, 12 last bullet • Long questions No. 12-18 • All Inquisitive Questions	43 45 45-48 48-51 51-53 53-55 57 57-58 58 58
16. Human Endocrine System	• 16.1.1/Chemical Nature of Hormones • Box: Artificially synthesized steroids • 16.2.8/ Other Endocrine glands/tissues • 16.3/ Feedback Mechanism in Endocrine System • MCQ No. 5 • Short answers No. 1, 2, & 9 last bullet • Long questions No. 2 & 7 • All Inquisitive Questions	59-61 70 70-71 71-72 73 73-74 74 74

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Chapter No. / Name	Excluded Topics and Exercise Questions	Page No.
17. Human Reproductive System	• All Inquisitive Questions	84
18. Inheritance	• 18.2.1/ Limitations to the Law of Independent Assortment • 18.2.2/ Inheritance and Mathematical Probabilities along with the box • 18.5/ Polygenic inheritance and Epistasis • 18.8.3/Sex Limited and Sex Influenced Traits • MCQ No. 9 & 13 • Short answers No. 1, 2, 12, 15 (iv& v), 16 (Bullet No. 6, 9 and 10) • Long questions No. 4, 5 & 11 • All Inquisitive Questions	90-91 91-92 98-102 112-113 114-115 115-116 116 116
19. Chromosomes and DNA	• Difference between DNA replication in prokaryotes and Eukaryotes • Stability and Variability in DNA • 19.7/ Regulating Gene Expression • Box: Minor Mutations in Humans • Box: Possible ways to treat Genetic Diseases • Tidbit • Short answers No. 7, 8 (Repressor and Activated proteins) • Long questions No. 11, 12 • All Inquisitive Questions	131 131 142-144 146 148 152 154-155 155 156 156
20. Biotechnology	• 20.4/ Genetically Modified Organisms (GMO) • MCQ No. 10 • Short answers No. 5 • All Inquisitive Questions	164-167 169 169 170
21. Immunity	• 21.3.2/Cell Mediated and Antibody mediated Immunity • MCQ No. 10 • Short answers 7 last bullet • Long questions No. 6 & 7 • All Inquisitive Questions	179-184 186 187 187 187
22. Biostatistics	Whole chapter is deleted.	188-209
23. Pharmacology	• 23.4/ Monoclonal Antibodies • MCQ No. 6	214-215 215

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Chapter No. / Name	Excluded Topics and Exercise Questions	Page No.
	• Short answers 5 • Long questions No. 3 • All Inquisitive Questions	216 216 216
24. Evolution	• 24.3/ Evidences of Evolution • MCQ No. 2, 3 & 8 • Short answers No. 2, 3 & 8 (second bullet) • Long questions No. 3, 4, 5 & 6 • All Inquisitive Questions	221-223 227 228 228 228
25. Ecology	• 25.1/Levels of Ecological Organization • 25.4/ Characteristics of Population • 25.6/ Important Ecosystem of Pakistan • MCQ No. 1 & 5 • Short answers No. 5, 6, 9, 10, 11, 12 (1, 3 and 4 bullet) • Long questions No. 4, 6 & 7 • All Inquisitive Questions	230-232 237-240 243-246 246-247 248 248 248

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viii. Explain how energy is lost between trophic levels in an ecosystem.

ix. Design a simple strategy to protect agriculture from climate change impacts.

(SECTION – II)

Note: Attempt any three questions. **(8 × 3 = 24)**

Q. 5: (a) Classify the animals on the bases of the ability to thermoregulate. 4

(b) Explain the flow of energy in successive trophic levels. 4

Q. 6: (a) Describe how the counter-current mechanism helps regulate urine concentration. 4

(b) Explain the theory of natural selection as proposed by Darwin. 4

Q. 7: (a) Explain the events and propagation of action potential. 4

(b) How do inflammatory response act as non-specific response to infections? 4

Q. 8: (a) State the names of the hormones secreted by thyroid gland. Write the function of each hormone. 4

(b) Explain the steps of polymerase chain reaction (PCR). 4

Q. 9: (a) Describe the events of a menstrual cycle. 4

(b) Explain the experimental work conducted by Griffith that demonstrated that DNA is the hereditary material. 4

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List of Excluded Practicals for Biology Grade-11

- Use of graticule and micrometer to study stomata and cells.
- Measuring the size of primary, secondary cell walls and middle lamella by micrometry
- Demonstration of the evolution of CO_2 from leaf discs placed in dark and light, with the help of indicator (hydrogen carbonate).

List of Excluded Practicals for Biology Grade-12

- Examination of the prepared slides of histology of ovaries and drawing its structures.

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