

ESKPXII-XXV (I)

BIOLOGY PART-II

Malakand 2025

Time Allowed: 3 Hrs

Marks: 85

Note: There are Three Sections in this paper i.e. A, B and C. Attempt Section-A and return it to the Superintendent within the given time. No marks will be awarded for Cutting, Erasing and Overwriting.

Mobile Phone is strictly prohibited in Examination Hall.

Time: 20 Minutes

SECTION "A"

Marks: 18

Q.1. Choose the correct option and shade one of (A, B, C, D) in the given Bubble Answer Sheet.

- i. Sense of smell is called:

☐ A Gustation	☐ B Olfaction	☐ C Tactation	☐ D None
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- ii. Polydipsia means:

☐ A Large volume of sweating	☐ B Excessive glucose in body	☐ C Excessive hunger	☐ D Excessive thirst
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- iii. The volume of air exchanged during one breath in and out in quite breathing is called:

☒ A Tidal volume	☐ B Residual volume	☐ C Lung volume	☐ D Lung capacity
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- iv. A single ova contain:

☐ A XY chromosome	☐ B Y chromosome	☒ C X chromosome	☐ D XXY chromosome
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- v. Which of the following carry genetic information?

☐ A tRNA	☒ B mRNA	☐ C rRNA	☐ D None
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- vi. Hormones derived from cholesterol are called:

☒ A Steroids	☐ B Peptides	☐ C Non-steroidal	☐ D Protein hormones
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- vii. Ozone layer is present in:

☐ A Troposphere	☐ B Mesosphere	☐ C Stratosphere	☐ D Thermosphere
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- viii. Largest bone in human body is:

☐ A Clavicle	☐ B Patella	☐ C Radius	☐ D Femur
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- ix. For detection of a gene in DNA library _____ is used:

☐ A Primer	☐ B Tag polymerase	☒ C Probe	☐ D Blotting
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- x. DNA and histones together form a bead like structure called:

☐ A Mesosome	☒ B Nucleosome	☐ C Polysome	☐ D Centrosome
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- xi. The discontinuous growing daughter strand during DNA replication is called:

☒ A Lagging strand	☐ B Leading strand	☐ C Smooth strand	☐ D Continuous strand
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- xii. Changes in gene frequencies in small population by chance is called:

☐ A Gene pool	☐ B Mutation	☐ C Genetic change	☐ D Genetic drift
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- xiii. _____ prepare body for stress and emergency situation?

☐ A Adrenaline	☐ B Thyroxin	☐ C Insulin	☐ D Nor Adrenaline
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- xiv. An individual with similar alleles is called:

☐ A Homozygous	☐ B Heterozygous	☐ C Monoicous	☐ D Diecious
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- xv. The optimum temperature for sperm development is about:

☐ A 37 C°	☐ B 36 C°	☐ C 35 C°	☐ D 33 C°
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- xvi. Who invented the PCR technique?

☐ A Sanger	☐ B Cohn	☒ C Boyer	☐ D Karry Mullis
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- xvii. Learning Behaviour will be:

☐ A Adoptable	☐ B Extrinsic	☐ C Progressive	☐ D All of these
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- xviii. Hunger center is located in:

☐ A Hypothalamus	☐ B Cerebellum	☐ C Medulla	☐ D Pones
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ESKPIXII-XXV (I)
BIOLOGY PART-II

Time: 2 Hours 40 Minutes

Malakand 2025

SECTION "B"

Marks: 40

Q.2. Give short answers to any TEN (10) questions. All questions carry equal marks.

- i. Describe the structure of taste receptors.
- ii. What is RNA splicing?
- iii. Define Co-dominance and over dominance with example.
- iv. What is the role of restriction endonucleases in biotechnology?
- v. Describe the structure of bone.
- vi. **What is pneumonia? Write down its symptoms and treatment.**
- vii. Write short note on kidney transplantation.
- viii. What is primary and secondary succession?
- ix. Define neuron. What are the different types of neurons?
- x. Shortly describe Genetic code.
- xi. Define struggle for existence and variation.
- xii. What are the problems related to rapid growth in human population?
- xiii. Shortly describe spermatogenesis.

SECTION "C"

Marks: 27

Note: Attempt any THREE (03) questions from the following. Each question carries equal marks.

- Q.3. Write detail note on peripheral nervous system. (9)
- Q.4. Write brief note on events of DNA replication. (9)
- Q.5. Briefly explain the structure and function of human kidney. (9)
- Q.6. Write note on:
 - a) Transport of O_2 as oxyhemoglobin (5)
 - b) Ecological Pyramids (4)