

## BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, PESHAWAR

Higher Secondary School Certificate (H.S.S.C.) Examination — Annual 2024

## BIOLOGY

|                             |                                  |            |                 |
|-----------------------------|----------------------------------|------------|-----------------|
| Class: 12th (Inter Part-II) | Paper ref: PR – XII (A-I-A) (24) | Year: 2024 | Medium: English |
|-----------------------------|----------------------------------|------------|-----------------|

Time: 20 Minutes

## SECTION - A

Marks: 18

Note: Four choices are given against each question; fill the circle of the correct answer only. Use a black or blue ball point / marker to fill the circle. Filling more than one circle for a question will be counted as a wrong answer.

- Blastocyst is attached to the uterus by:  
☐ Inner cell mass ☐ Epiblast  
☐ Hypoblast ☐ Trophoblast
- In 4 O'clock plant  $R_2R_2$  represent \_\_\_\_ flower.  
☐ Yellow ☐ Red ☐ White ☐ Pink
- Human blood group ABO are controlled by \_\_\_\_ number of alleles.  
☐ 1 ☐ 2 ☐ 3 ☐ 15
- According to conservative model the parental DNA remain \_\_\_\_ After replication.  
☐ Intact ☐ Dispersed ☐ Unwind ☐ Hybrid
- Genetic codes, those encodes specific amino acids are termed as:  
☐ Anticodes ☐ Stop codons  
☐ Start codons ☐ Sense codons
- Organisms evolved through the inheritance of acquired characteristics according to:  
☐ Lamarck ☐ Lyell ☐ Cuvier ☐ Louis Agassiz
- The rate at which the new individuals are added to a population in a unit time is:  
☐ Mortality ☐ Natalty ☐ Dispersion ☐ Succession
- Genome mean \_\_\_\_ gene of an organism.  
☐ Single ☐ Few ☐ No ☐ All
- Chimpanzee and Gorilla can be categorized as \_\_\_\_ animals.  
☐ Draught ☐ Tamed ☐ Wild ☐ Domesticated
- Respirator surfaces must be:  
☐ Thick ☐ Hard ☐ Thin ☐ Impermeable
- Long term exposure to industrial pollutants or dust may cause:  
☐ Emphysema ☐ Emphyema  
☐ Hyponatremia ☐ Tinnitus
- The capillaries of vasa recta run anti-parallel to the:  
☐ Glomerulus ☐ Bowman's capsule  
☐ Loop of Henle ☐ Collecting duct
- Sphenoid and Ethmoid bones are the part of human:  
☐ Neck ☐ Skull ☐ Trunk ☐ Limbs
- Sciatica refer to a pain in the:  
☐ Spine ☐ Joint ☐ Bone ☐ Leg
- Nerve fiber is different from muscle fiber due to the presence of:  
☐ Sarcomere ☐ Sarcolemma  
☐ Dendrites ☐ Myofibrils
- Testosterone is secreted from:  
☐ Gonades ☐ Ovaries ☐ Testes ☐ Kidneys
- In animals hostile or friendly interactions are examples of \_\_\_\_ behaviors.  
☐ Social ☐ Innate ☐ Habituation ☐ Imprinting
- In females cyclic menstruation is an indicator of:  
☐ Infertility ☐ Menopause  
☐ Normal reproduction ☐ Endometriosis

## SECTION - B

Note: Time allowed for Section-B and Section-C is 2 Hours and 40 minutes.

**Q2: Answer any TEN parts. Each part carries FOUR marks.**

- State about the volumes and capacities of lungs.
- Compare the structure and function of nephron and dialyzer?
- Enlist the name of joints according to their structural classification.
- Write briefly about drug tolerance.
- Define hormone and name the hormones secreted from anterior lobe of pituitary gland?
- Innate behavior ensure the survival of individual in a population, how?
- Briefly discuss about Epididymis and Fallopian tubes.
- Mention about the system level changes in aging?
- Illustrate about Erythroblastosis foetalis.
- Write any four differences between Transcription and Translation.

11. Briefly elaborate the statement “Natural Selection or Survival of the fittest”.
12. Briefly discuss about Global Warming.
13. Write the applications of PCR.

---

### SECTION - C

---

*Note: Attempt any THREE questions. All questions carries equal marks.*

- Q3: (a) Explain the term Acclimatization and Selective Breeding.  
(b) Mention any four aspects related to the safety in Biotechnology.
- Q4: (a) Discuss about human lungs.  
(b) Discuss about lithortripsy.
- Q5: (a) Write the causes, kinds and symptoms of stroke.  
(b) Briefly explain negative feedback mechanism.
- Q6: Explain gene and chromosomal mutation in detail.

---

#### Notes on this transcription

- This is a **typeset transcription** of the original paper, not a photograph of it. Question wording, spelling, punctuation and numbering are reproduced exactly as printed, including the board's own errors.
- **No answer key is included.** On the source sheet the correct circles are already shaded in; every option here is reproduced unmarked so the paper can be attempted.
- Peshawar Board papers carry no group label, so this paper is filed without one.
- The objective-section instructions are printed in Urdu on the original sheet; an English rendering of them is given above.
- Board spellings and slips kept verbatim: “Epibalst” (Q.1), “Respirator surfaces” for respiratory (Q.10), “Glumerulus” (Q.12), “Gonades” (Q.16), “Erythrobustosis foetalis” (Section-B 9), “lithortripsy” (Q4 b), and “All questions carries equal marks”.
- Section-B and Section-C print no per-part mark figures beyond the FOUR marks stated in the Q2 rubric, so the marks column is left empty.