

1	2
2	2
3	3

Note: There are THREE sections in this paper i.e. A, B & C. Attempt Section-A and return it to the Superintendent within the given time. No marks will be awarded for cutting, erasing and overwriting.

Time: 15 minutes

Section-A

Marks: 12

QNo.1 Select the correct option and insert (A,B,C,D) in the relevant box.

- i. Who wrote the book Al-Qanoon-fi-Tib in Muslim scientists?

A- Ibn Al Nafees B- Alfarabi C- Bu Ali Sina D- Ali Ibn Essa
- ii. The number of mammals are about _____ in Pakistan.

A- 160 B- 165 C- 168 D- 178
- iii. Felis domestica is the scientific name of _____.

A- Lion B- Dog C- Cat D- Leopard
- iv. The cell wall of fungi is made up of _____.

A- Cellulose B- Hemicellulose C- Chiten D- Protein
- v. Centriole divides in the _____ of Mitosis.

A- Metaphase B- Anaphase C- Telophase D- Prophase
- vi. Pepsin Enzyme works best at a pH _____.

A- 0-2 B- 3-4 C- 4-5 D- 6-8
- vii. Visible light ranges about _____ nm in wavelength.

A- 300 – 500 B- 350 – 650 C- 400 – 700 D- 400 - 750
- viii. Smoking decreases the vitamin _____ in human body.

A- A B- B C- C D- D
- ix. Mostly plants get Nitrogen _____ in forms.

A- NH_3 B- N_2 C- Nutrients D- Vitamins
- x. Biologist who propose "Pressure Flow Theory" _____.

A- Muller B- Robert Hook C- Robert Brown D- Earnest Munch
- xi. Diarrhea is usually related to a _____ viral or parasitic infection.

A- Water B- Bacterial C- Temperature D- Algae
- xii. ABO blood group system was discovered by _____ in 1901 for the 1st time.

A- Muller B- Robert Brown C- Schwan D- Karl Land Steiner

Note: Time allowed 2:45 hours.

SECTION – B

Marks: 32

Q2: Answer any EIGHT parts. Each part carries equal marks.

- i. Write the services of Bu Ali Sina in the field of science.
- ii. How the Malaria treatment became possible?
- iii. Write down importance of Binomial Nomenclature.
- iv. Write note of the scanning Electron Microscope (SEM).
- v. Briefly explain diffusion.
- vi. Describe the S-phase (synthesis phase) in the cell cycle.
- vii. Write down significance of Meiosis.
- viii. Discuss the effect of temperature on enzyme activity.
- ix. Write the effect of carbon dioxide concentration on the rate of photosynthesis.
- x. Briefly discuss the advantages of organic fertilizers.
- xi. Differentiate between antigen and antibodies.

SECTION – C

Marks: 21

Note: Attempt any THREE of the following. All questions carry equal marks.

- Q3. (a) What is cellular organization? Discuss its types.
(b) Write down steps of biological scientific method.
- Q4. (a) Discuss viruses as a unique particle.
(b) Differentiate between prokaryotic and eukaryotic cells.
- Q5. Discuss the process of Mitosis in detail.
- Q6. (a) Explain the structure and function of large intestine and its parts in the human digestive system?
(b) Discuss the structure of Human heart.