

**Model Paper**  
**BIOLOGY (New)**  
**Inter Part-II**  
**(Fresh/Reappear)**

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

**Section – B**

**Marks: 40**

Q-II Answer any TEN parts. Each part carries FOUR marks.

1. How transport of carbon dioxide takes place in Human blood both as bicarbonate ions and as carboxyhaemoglobin?
2. Write a brief note on structure of Nephron.
3. How osmoregulation process of marine animals is different from fresh water animals?
4. Define Arthritis. Mention its symptoms and causes.
5. What is Reflex Arc? Mention its different components.
6. Mention the three big parts of Hindbrain along with their functions.
7. Write the names of two important hormones of posterior lobe of pituitary gland along with their functions.
8. What do you know about process of spermatogenesis in male human?
9. Mention the role of cytoplasm in process of development by giving example.
10. How many blood types are there in Human? Mention the names of antigen and antibodies of each type.
11. What do you know about semi-conservative model of DNA replication?
12. Write a brief note on Darwin's theory of Evolution.
13. What is gene therapy? What three approaches are used by researchers for correcting faulty gene?

**Section – C**

**Marks: 27**

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

- Q-III (a) Discuss the osmoregulatory function of kidney.  
(b) Write about four groups of vertebrae in Human vertebral column.
- Q-IV (a) Define nerve impulse. Differentiate between resting membrane potential and active membrane potential.  
(b) How is insulin secreted by pancreas and what functions are performed by insulin?
- Q-V State Mendal's Law of Independent Assortment of gene and prove the phenotypic and genotypic ratio with the help of making checker board.
- Q-VI (a) Differentiate between aneuploidy and euploidy.  
(b) Give argument for using fossil evidence in favour of organic evolution.