

Time allowed: 3 Hrs code: 33

Biology (Part – II)  
Fresh / Reappear

Fic. No.....

Marks: 85

Note: There are three sections of the paper, A, B & C. Attempt Section – A on the same paper and return it to the Superintendent within the given time. No marks will be awarded for cutting, erasing or over writing. Mobile phone etc. are not allowed in the examination hall.

Time: 20 Mins

## Section "A"

Marks: 18

Q.1 Write the correct option i.e. A, B, C or D in the empty box provided opposite each part.

- i. The groups of ribosomes present in the cell body of the neuron, which are associated with rough endoplasmic reticulum are called  C
- A. Miersner's corpuscles B. Pacinian corpuscles C. Nissles granules D. Lysosome granules
- ii. Glycosuria is related to deficiency of which hormone?  D
- A. Glucogan B. Thyroxin C. Epinephrin D. Insulin
- iii. A type of learning that uses reason or judgment to solve a problem is called .....  A
- A. Insight learning B. Classical conditioning C. Instrumental learning D. Imprinting
- iv. The uterine layer which is shed with each monthly cycle is .....  A
- A. Endometrium B. Perimetrium C. Myometrium D. Tunica albuginea
- v. The genotypic ratio of Mendelian monohybrid cross was .....  B
- A. 3:1 B. 1:2:1 C. 9:3:3:1 D. 1:2
- vi. A chromosome with equal length of its arms is called .....  A
- A. Metacentric B. Aérocentric C. Telocentric D. Submetacentric
- vii. Who stated that ontogeny recapitulates phylogeny?  A
- A. Hackle B. Darwin C. Lamarck D. Weinberg
- viii. The causes of green house effect are .....  D
- A. Over urbanization B. Deforestation C. Industrialization D. All of them
- ix. The organism product through recombinant DNA technology is called .....  D
- A. Genetically modified B. Genetically engineered C. Transgenic organism D. All of these organism
- x. In AB blood group, alleles  $I^A I^B$  are .....  B
- A. Dominant B. Co-dominant C. Over dominant D. Incomplete dominance
- xi. Universal donor for blood transfusion is .....  B
- A. AB blood group B. Blood group O C. Blood group A D. Blood group B
- xii. How much air the human lungs can hold when they are fully inflated?  C
- A. 1.5 litre B. 4 litre C. 5 litre D. 6 litre
- xiii. The spongy nature of the human lungs is due to presence of .....  B
- A. Bronchi B. Alveoli C. Bronchioles D. Trachea
- xiv. Marine bony fishes excrete monovalent ions such as  $Na^+$  and  $Cl^-$  across the .....  C
- A. Skin B. Kidney C. Gills epithelium D. All of these
- xv. After drinking much water the secretion of which hormone is inhibited?  A
- A. ADH B. Insulin C. Glucagan D. Calcitonin
- xvi. A pain disorder in the narrow muscle of the buttocks is called .....  C
- A. Spondylosis B. Arthritis C. Piriformis syndrome D. Sciatica
- xvii. How many individuals bones are present in adult human being?  A
- A. 206 B. 350 C. 126 D. 266
- xviii. Among twelve pairs of cerebral nerves the number of sensory nerves are .....  B
- A. 2 pairs B. 3 pairs C. 4 pairs D. 5 pairs

**Section "B"**

**Marks: 40**

- Q.2 Attempt any TEN parts. Each part carries equal marks.
- i. What are the risk factors of causes of T.B?
  - ii. What is the role of hypothalamus in thermoregulation?
  - iii. Write only labell diagram of composition of sarcomere?
  - iv. Define nerve impulses. How action membrane potential arises?
  - v. Write briefly about function of calcitonin.
  - vi. Write a brief note on territorial behavior. Give one example.
  - vii. Define AIDS. How it causes and write at least four risk factors of this disease.
  - viii. Differentiate identical and fraternal multiple fetuses.
  - ix. Write note on incomplete dominance.
  - x. Define RNA splicing.
  - xi. Differentiate between convergent and divergent evolution.
  - xii. Write about greenhouse effect.
  - xiii. Discuss briefly about restriction enzymes or molecular scissor.

**Section "C"**

**Marks: 27**

Note: Answer any THREE questions. All questions carries equal marks.

- Q.3 Explain the role of hormones secreted by anterior lobe of pituitary gland.
- Q.4 Describe causes, symptoms and treatment of Down's syndrome.
- Q.5 What is Rh blood group system? Discuss maternal – foetal Rh incompatibility.
- Q.6 a. What is synovial joint? Mention its two types.  
b. What is reflex arc?