

Time allowed: 3 Hrs

Biology (Part - I)
Fresh / Reappear

Code - 22

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. 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 to each part. No marks will be awarded for cutting, erasing or over writing.

- | | | | | | |
|--|---------------------|-----------------|-------------------|------------------|----------------------------|
| i. Respiration in spider and scorpion occur through | A. Trachea | B. Spiracles | C. Skin | D. Book Lungs | <input type="checkbox"/> D |
| ii. Hydrochloric Acid in stomach is secreted by | A. Parietal cells | B. Peptic cells | C. Delta cells | D. Chief cells | <input type="checkbox"/> A |
| iii. In woody tissues the middle lamella is commonly composed of | A. Cutin | B. Cellulose | C. Lignin | D. Suberin | <input type="checkbox"/> C |
| iv. Nitrocellulose is used in | A. Explosive | B. Paper making | C. Textile Fiber | D. None of these | <input type="checkbox"/> A |
| v. Number of DNA molecule/molecules in the nucleoid of a bacterium is | A. 12 | B. 04 | C. 03 | D. 01 | <input type="checkbox"/> D |
| vi. In DNA Guanine forms three Hydrogen bonds with | A. Thyamine | B. Adenine | C. Cytosine | D. Uracil | <input type="checkbox"/> C |
| vii. Most of fatty acids in cell contain carbon atoms per molecule | A. 2 - 30 | B. 4 - 8 | C. 10 - 12 | D. 16 - 18 | <input type="checkbox"/> C |
| viii. Sodium content of the blood is regulated by a hormone called | A. Insulin | B. Glucagon | C. Aldosterone | D. Testosterone | <input type="checkbox"/> C |
| ix. Amino acids mainly differ from each other by the difference in their : | A. Amino group | B. R - group | C. Carboxyl group | D. Hydrogen | <input type="checkbox"/> B |
| x. The optimum PH for enzyme catalase is | A. 4.7 | B. 4.5 | C. 1.6 | D. 7.0 | <input type="checkbox"/> D |
| xi. Which of the following enzyme works best at a PH of 4.5. | A. Maltase | B. Trypsin | C. Urease | D. Invertase | <input type="checkbox"/> D |
| xii. ATPs formed in the reduction phase of an aerobic respiration are | A. 36 | B. 04 | C. 02 | D. 00 | <input type="checkbox"/> B |
| xiii. In photorespiration Glycine is synthesized in cell organelle | A. Mitochondrion | B. Peroxisome | C. Chloroplast | D. Glyoxisome | <input type="checkbox"/> B |
| xiv. The final electron acceptor in Non-cyclic electron pathway is | A. H ₂ O | B. NADP | C. PS-I | D. Plastocynine | <input type="checkbox"/> B |
| xv. All of the following are the non living characters of virus except | A. Crystalline | B. Acellular | C. Mutation | D. All of these | <input type="checkbox"/> C |
| xvi. Cadang - cadang is a disease caused by | A. Virus | B. Viriod | C. Prion | D. Bacteria | <input type="checkbox"/> B |
| xvii. Trypanosoma belongs to | A. Zooflagellates | B. Ciliates | C. Apicomplexan | D. None | <input type="checkbox"/> A |
| xviii. Which one is the living genera of psilopsida | A. Rhyntia | B. Cooksonia | C. Psilotum | D. None | <input type="checkbox"/> C |

Time: 2:40 Hours

R-484

KT-XI-1901

Biology (Part – I)

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Section "B"

Marks: 40

- Q.2 Attempt any TEN parts. All parts carry equal marks.
- Differentiate peroxisomes from Glyoxisomes.
 - Why mitochondrion is called as self replicating organelle? Draw its structure also.
 - Write a note on oligosaccharides.
 - Write the various types of lipids. Draw the structural formula of triglycerides.
 - Write four differences between C_4 plants and C_3 plants.
 - Explain the structure of Human Immune virus.
 - Why sphenospida is called Horse tail? Explain its Sporophyte.
 - Explain evolution of megaphyllous leaf.
 - Write the main characteristics of chordates
 - What is Bulimia nervosa? Write its symptoms.
 - Explain the role of liver in Detoxification.
 - Write a note on peristalsis.
 - What is pyrogen? Write the benefits of fever.

Section "C"

Marks: 27

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

- Q.3 Define cellular respiration, write a detail note on Krebs's Cycle.
- Q.4 Explain the life Cycle of Adiantum.
- Q.5 Explain the structure of DNA.
- Q.6 Write note on any two of the following.
- Typhoid Fever
 - Herpes
 - Lichens