

INDIAN INSTITUTE OF TECHNOLOGY MADRAS, CHENNAI-600036.

Advertisement No. IITM/R/2/2024 dated 02.03.2024

Syllabus & Scheme of Examination

Post: Junior Technician

Stream: Zoology

LEVEL-1 Multiple Choice Question Test

(100 Marks)

PART – A

(30 Marks)

1. **Quantitative aptitude:** Number systems, simplification, decimals, fractions, LCM, HCF, ratio & proportion, percentage, log and trigonometric functions, solutions of simple equations (linear and quadratic), basic statistics – mean and standard deviation, profit & loss, discount, simple & compound interest, mensuration, time & work, time & distance, tables & graphs.
2. **Logical reasoning aptitude:** Analogies, similarities, differences, space visualization, analysis, judgment, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning, verbal and figure classification
3. **Computer-related aptitude:** Hardware, software, operating systems, basic operations in MS Office - Word, Excel, Powerpoint
4. **Language aptitude:** Comprehension, vocabulary, basic grammar in English.
5. **General awareness aptitude:** Current events, general knowledge, Indian history, Indian constitution, basic geography.

PART – B

(70 Marks)

1. **Non-chordates:** Basic classification of lower invertebrates; Platyhelminthes, nematodes, arthropods.
2. **Chordates:** Classification of Pisces, Amphibians, Reptiles, Aves, and Mammals; Laboratory animals-rat, mice, rabbits, hamster.
3. **Physiology and Biochemistry:** Biomolecules-carbohydrate, protein, nucleic acid, and lipids; physiology of digestive, respiratory, circulatory, excretory, nervous, muscular, endocrine, and reproductive system; metabolism.
4. **Genetics and evolutionary biology:** Introduction to genetics, Mendelian principles of inheritance, linkage, crossing over, sex determination, mutations; history of life, evolutionary theories, processes of evolutionary change.
5. **Applied zoology:** Host-parasite relationship, principles of disease diagnosis, including bacterial, viral, and fungal infection, and isolation of disease agent, animal husbandry, laboratory animal breeding, weaning, and care.

6. **Developmental biology:** Cleavage, blastulation, cell lineage, development of chick.

7. **Animal biotechnology:** Animal cell and tissue culture, genetically modified animals, molecular techniques in gene manipulation.

LEVEL – 2 Trade Test

- **Trade Test** - Syllabus as above under Part-B for Level-1 Multiple Choice Question Test.

Scheme of Examination:

Level	Type of Test	Time	No. of Questions – Max. Marks	Weightage for the final result
Level -1	Multiple Choice Question Test	Time: 120 Minutes	100 Objective Questions – 100 Marks	70 %
Level–2	Trade Test	Time: 90 minutes approximately	Practical Trade Test	30 %

- A minimum of 5X candidates shall be shortlisted (for X number of posts advertised) for the Level-2 Trade Test, based on their performance in the Level-1 Multiple Choice Question Test.

NOTE:

- a) The medium of examination will be ENGLISH
- b) The questions will generally be on the minimum qualification level i.e. Graduation.
- c) There shall be no negative marking for wrong answers.
- d) **The Level-1 Multiple Choice Question Test is tentatively scheduled to be held on 06th February 2025 at TCS iON Centres in Chennai.**