



S-VYASA

Swami Vivekananda Yoga Anusandhana Samsthana
(Deemed to be University u/s 3 of UGC Act, 1956)

Total marks: 50

Duration: 45 min

Pass marks: 25

I. Syllabus of Computer Science

15 Marks

1. Foundations of Computer Science:

- Evolution and Generations of Computers
- Number Systems and Data Representation
- Algorithms and Problem-Solving Techniques
- Time and Space Complexity (Big-O Notation)
- Programming Concepts: Variables, Data Types, Control Structures, Functions and Recursion

2. Core Areas of Computer Science:

➤ Data Structures and Algorithms

- Arrays, Linked Lists, Stacks and Queues
- Trees and Graphs
- Searching and Sorting Techniques

➤ Database Management Systems

- ER Model and Relational Model
- SQL Queries
- Normalization
- Transactions and ACID Properties

➤ Operating Systems

- Processes and Threads
- CPU Scheduling
- Deadlocks
- Memory Management

➤ Computer Networks

- OSI and TCP/IP Models
- IP Addressing

- Common Network Protocols
- Basics of Network Security

➤ Artificial Intelligence and Machine Learning

- Introduction to Artificial Intelligence
- Intelligent Agents
- Supervised and Unsupervised Learning
- Neural Networks and Deep Learning Basics
- Applications of AI in Real-World Problems

II. Research Aptitude

15 Marks

- Research: Meaning, characteristics and types
- Steps of research
- Methods of research
- Research Ethics
- Paper, article, workshop, seminar, conference and symposium
- Statistics Concepts

III. Reasoning

10 Marks

- Number series
- Letter series
- Codes
- Relationships
- Classification

IV. Information and Communicating Technology (ICT)

5 Marks

- ICT: meaning, advantages, disadvantages and uses
- General abbreviations and terminology
- Basics of internet and e-mailing

V. English Grammar

5 Marks

Marking Scheme

1. The Test paper will consist of 50 objective type, multiple-choice questions.
2. Each question carries 01 (one) mark.
3. For each correct response, the candidate will get 01 (one) mark.
4. To answer a question, the candidate needs to choose one option as the correct option.
5. No marks will be awarded if more than one option is selected for a question.
6. There is no negative marking for incorrect response.
7. No marks will be given for questions un-answered / un-attempted / marked for Review.
8. In the test paper, if a question is found to be incorrect, ambiguous, or has multiple correct answers, one (01) mark will be awarded only to those candidates who have attempted the question and selected one of the correct options. The reason could be due to human error or technical error.