

OlympAI SYLLABUS CLASSES 6-8

1. Basics of AI

- What is Artificial Intelligence?
- Types of AI
- Application of AI
- AI and Future

2. Statistics**

- Cases and Variables
- Frequency Tables
- Mean, Median, Mode

3. Introduction to Python programming

- Understanding Python Syntax
- Variables and Data Types
- Basic Input/Output Methods
- Basics of Conditional Statements and Loops

4. Data Science

- Data and Data Types

5. Computer Vision

- Basics of Computer Vision

6. Natural Language Processing (NLP)

- Basics of NLP

7. Reasoning and Problem Solving

- Chapter 1: Series Completion and Inserting
- Chapter 2: Analogy and Classification
- Chapter 3: Coding-Decoding
- Chapter 4: Blood Relations
- Chapter 5: Direction Sense Test
- Chapter 6: Logical Venn Diagrams
- Chapter 7: Alpha-Numeric Sequence
- Chapter 8: Mathematical Operations
- Chapter 9: Analytical Reasoning
- Chapter 10: Mirror and Water Images
- Chapter 11: Embedded Figures, Figure Formation
- Chapter 12: Figure Matrix
- Chapter 13: Paper Folding and Paper Cutting
- Chapter 14: Cubes and Dice
- Chapter 15: Dot Situation

Hints & Explanations

OlympAI SYLLABUS CLASSES 9-10

1. Basics of AI

- What is Artificial Intelligence?
- Types of AI
- Application of AI
- AI and Future
- Ethical Considerations in AI
- Machine Learning

2. Statistics**

- Understanding of Visual Data

3. Introduction to Python Programming

- Control structures (if-else, loops)
- Python Strings
- Functions and Modules
- Lists, Tuple and Dictionaries

4. Data Science

- Data and Data Types
- Data Cleaning and Preprocessing
- Data Visualization (using Python libraries)

5. Computer Vision

- Basics of Computer Vision
- Image Processing
- Feature Extraction
- Object Detection and Recognition

6. Natural Language Processing (NLP)

- Introduction to NLP
- Text Preprocessing (Tokenization, Stop Words, Stemming, Lemmatization)

7. Machine Learning Fundamentals

- Supervised Learning (Regression, Classification)
- Unsupervised Learning (Clustering, Dimensionality Reduction)
- Reinforcement Learning

8. Reasoning and Problem Solving

VERBAL REASONING

- Chapter 1: Series Completion
- Chapter 2: Analogy
- Chapter 3: Classification
- Chapter 4: Coding-Decoding
- Chapter 5: Blood Relations
- Chapter 6: Puzzle Test
- Chapter 7: Sequential Output Tracing
- Chapter 8: Direction Sense Test
- Chapter 9: Logical Venn Diagrams
- Chapter 10: Alphabet Test and Logical

- Chapter 11: Alpha-Numeric, Number
- Chapter 12: Mathematical Operations
- Chapter 13: Inserting The Missing Character

NON-VERBAL REASONING

- Chapter 14: Series
- Chapter 15: Analogy and Classification
- Chapter 16: Analytical Reasoning
- Chapter 17: Mirror and Water Images
- Chapter 18: Spotting Out The Embedded
- Chapter 19: Figure Matrix
- Chapter 20: Paper Folding and Paper Cutting
- Chapter 21: Grouping of Identical Figures
- Chapter 22: Cubes and Dice
- Chapter 23: Dot Situation
- Chapter 24: Construction of Squares & Triangles
- Chapter 25: Figure Formation and Analysis