COMPUTER SYLLABUS

Class – 9

9th Class Computer Syllabus – An Overview

In Class 9, the NCERT Computer Science syllabus emphasizes foundational knowledge in computer science and introduces students to more complex concepts and practical applications. Here's a comprehensive breakdown of the topics and sub-topics typically covered:

Here our chapters for ITSE Examination :-

Chapter – 1 (*Introduction to Computer Systems* **)**

Chapter – 2 (*Hardware Components***)**

Chapter – 3 (Software Concepts)

Chapter – 4 (Understanding Networks and the Internet)

Chapter - 5 (Introduction to Office Applications)

Chapter - 6 (Digital Communication and Collaboration)

Chapter – 7 (Introduction to Programming)

Chapter – 8 (*Web Development Basics***)**

Chapter - 9 (*Multimedia and Graphics***)**

Chapter - 10 (*Cyber Safety and Security***)**

Chapter - 11 (*Practical Applications and Projects* **)**

Chapter – 1 (Introduction to Computer Systems)

Topics and Sub – Topics :-

- **Basic Concepts of Computers**

    - Definition and characteristics of computers.
    - Overview of computer systems: Hardware and software components.

- **Types of Computers**

    Categories based on size and function: Personal computers, Workstations, Servers, Mainframes, Supercomputers.

    - Mobile and embedded systems: Smartphones, Tablets, IoT devices.

Chapter – 2 (Hardware Components)

Topics and Sub – Topics :-

- **Detailed Study of Computer Hardware**

    - Internal components: Motherboard, CPU, RAM, Storage devices (HDD, SSD).
    - Peripheral devices: Input (Keyboard, Mouse, Scanner), Output (Monitor, Printer, Speakers).

- **Storage and Memory**

    - Primary vs. secondary storage.
    - Different types of storage devices and their capacities.

Chapter – 3 (Software Concepts)

Topics and Sub – Topics :-

- **Types of Software**

    - System Software: Operating Systems, Utility programs.
    - Application Software: Office applications, Graphics software, Communication tools.
    - Programming Software: Compilers, Interpreters, IDEs.

- **Operating Systems**
    - Functions and types of operating systems.
    - Basic navigation and management in Windows, macOS, Linux.

Chapter – 4 (Understanding Networks and the Internet)

Topics and Sub – Topics :-

- **Networking Basics**

    - Definition and types of networks: LAN, WAN, MAN.
    - Network topologies: Star, Ring, Bus, Mesh.

- **Internet and Web Technologies**

    - Understanding how the internet works: ISPs, IP addresses, DNS.
    - Basics of web technologies: HTTP/HTTPS, URLs, Browsers.

- **Online Services and Communication**

- Email, Social Media, Instant Messaging.
- Cloud computing and online collaboration tools.

Chapter - 5 (Introduction to Office Applications)

Topics and Sub – Topics :-

- **Word Processing**

  - Creating, editing, and formatting documents.
  - Using advanced features: Styles, templates, mail merge.

- **Spreadsheets**

  - Basic data entry and formatting.
  - Using formulas and functions for calculations.
  - Creating charts and graphs for data visualization.

- **Presentation Software**

  - Designing and creating presentations.
  - Using multimedia elements and animations in slides.

Chapter - 6 (Digital Communication and Collaboration)

Topics and Sub – Topics :-

- **Effective Use of Email**

  - Composing, sending, and managing emails.
  - Email etiquette and safety practices.

- **Online Collaboration Tools**

  - Using tools like Google Drive, Microsoft OneDrive for collaboration.
  - Basics of video conferencing and virtual meetings.

- **Social Media and Digital Citizenship**

  - Understanding social media platforms.
  - Responsible and ethical behaviour online.

Chapter – 7 (Introduction to Programming)

Topics and Sub – Topics :-

- **Basic Programming Concepts**

  - Understanding algorithms and flowcharts.
  - Programming constructs: Variables, data types, operators, control structures.

- **Block-based Programming**

  - Using tools like Scratch for creating simple programs.
  - Concepts: Loops, conditionals, events.

- **Text-based Programming (Python)**

  - Introduction to Python: Syntax, basic commands, and IDE.
  - Writing and executing simple Python scripts.
  - Understanding and using basic data structures: Lists, dictionaries.

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Chapter – 8 (Web Development Basics)

Topics and Sub – Topics :-

- **HTML and CSS**

  - Understanding HTML structure and tags.

- Creating and styling simple web pages with HTML and CSS.

- **Introduction to JavaScript**

  - Basics of JavaScript for adding interactivity to web pages.
  - Simple scripts for user input validation and dynamic content.

- **Building Simple Websites**

  - Combining HTML, CSS, and JavaScript to create functional web pages.
  - Hosting and managing websites on the internet.

Chapter - 9 (Multimedia and Graphics)

Topics and Sub – Topics :-

- **Digital Image Creation and Editing**

  - Using graphic design software to create and edit images.
  - Understanding image formats and resolution.

- **Audio and Video Editing**

  - Basics of audio recording and editing.
  - Introduction to video editing: Trimming, transitions, effects.

- **Creating Multimedia Projects**

  - Integrating text, graphics, audio, and video into multimedia presentations.
  - Using multimedia software tools for project creation.

Chapter - 10 (Cyber Safety and Security)

Topics and Sub – Topics :-

- **Understanding Cyber Threats**

    - Recognizing types of cyber threats: Viruses, malware, phishing.
    - Basics of cyber security measures: Antivirus, firewalls, encryption.

- **Safe Online Practices**

    - Importance of strong passwords and secure browsing.
    - Protecting personal information and digital identity.

- **Ethical and Legal Issues in Computing**

    - Intellectual property rights and copyright laws.
    - Ethical considerations and responsible use of technology.

Chapter - 11 (Practical Applications and Projects)

Topics and Sub – Topics :-

- **Integrated Projects**

    - Applying knowledge from different topics to create comprehensive projects.
    - Examples: Creating a newsletter, designing a website, developing a simple game.

- **Hands-on Activities**

- Practical exercises to reinforce learning.
- Group projects to enhance teamwork and collaboration skills.