

Computer Applications

Subject Code - 165

CLASS IX (2025-26)

Learning Outcomes

After the completion of the course, the student will be able to:

1. Familiarise themselves with the fundamental components and functions of computer systems, memory, storage devices, and I/O devices.
2. Develop an understanding of various types of software, computer networks, and multimedia.
3. Understand the importance of Safe Internet Practices
4. Create and edit documents, spread sheets, and presentations.
5. Perform basic data manipulation using spread sheets.
6. Animate text and pictures using presentation tool

Distribution of Marks and Periods

Unit No.	Unit Name	Marks
1.	Basics of Information Technology	20
2.	Cyber safety	15
3.	Office Tools	15
4.	Lab Exercises	50
	Total	100

Unit 1: Basics of Information Technology

- Computer Systems: characteristics of a computer, components of a computer system – CPU, memory, storage devices and I/O devices
- Memory: primary (RAM and ROM) and secondary memory
- Storage devices: hard disk, CD ROM, DVD, pen/flash drive, memory stick
- I/O devices: keyboard, mouse, monitor, printer, scanner, web camera
- Types of software: system software (operating system, device drivers), application software including mobile applications
- Computer networking: Type of networks: PAN, LAN, MAN, WAN, wired/wireless communication, Wi-Fi, Bluetooth, cloud computers (Private/public)
- Multimedia: images, audio, video, animation

Unit 2 : Cyber-safety

Safely browsing the web and using social networks: identity protection, proper usage of passwords, privacy, confidentiality of information, cyber stalking, reporting cybercrimes

- Malware: Viruses, adware

Unit 3: Office tools

- Introduction to a word processor: create and save a document.
- Edit and format text: text style (B, I, U), font type, font size, text colour, alignment of text. Format paragraphs with line and/or paragraph spacing. Add headers and footers, numbering pages, grammar and spell check utilities, subscript and superscript, insert symbols, use print preview, and print a document.
- Insert pictures, change the page setting, add bullets and numbering, borders and shading, and insert tables – insert/delete rows and columns, merge and split cells.
- Use auto-format, track changes, review comments, use of drawing tools, shapes and mathematical symbols.
- Presentation tool: understand the concept of slide shows, basic elements of a slide, different types of slide layouts, create and save a presentation, and learn about the different views of a slide set – normal view, slide sorter view and handouts.
- Edit and format a slide: add titles, subtitles, text, background, and watermark, headers and footers, and slide numbers.
- Insert pictures from files, create animations, add sound effects, and rehearse timings.
- Spreadsheets: concept of a worksheet and a workbook, create and save a worksheet.
- Working with a spreadsheet: enter numbers, text, date/time, series using auto fill; edit and format a worksheet including changing the colour, size, font, alignment of text; insert and delete cells, rows and columns. Enter a formula using the operators (+, -, *, /), refer to cells, and print a worksheet.
- Use simple statistical functions: SUM (), AVERAGE (), MAX (), MIN (), IF () (without compound statements); embed charts of various types: line, pie, scatter, bar and area in a worksheet.

4. Lab Exercises

- Browser settings for a secure connection
- Working with the operating system: Navigation of the file system using a mouse and keyboard.
- Word processing: create a text document; create a letter, report, and greeting card.
- Create a text document with figures in it. It should describe a concept taught in another course.
- Discuss the following in a text document about the basic organisation of a computer: CPU, memory, input/output devices, hard disk.
- Create a text document in an Indian language other than English.
- Create a presentation.
- Create a presentation with animation.
- Include existing images/ pictures in a presentation.
- Animate pictures and text with sound effects in a presentation
- Create a simple spreadsheet and perform the following operations: min, max, sum, and average.
- Create different types of charts using a spreadsheet: line, bar, area and pie.

Breakup of marks for the Practicals:

S.No.	Unit Name	Marks
1.	Lab Test (30 marks)	
	Word processing	10
	Handling spreadsheets	10
	Creating presentations	10
2.	Report File + viva (10 marks)	
	Report file:-- 4 documents each with a word processor, spreadsheet, and presentation tool	8
	Viva voce (based on the report file)	2
3.	Project (that uses most of the concepts that have been learnt) (10 marks)	
	Total Marks	50

Computer Applications
Subject Code - 165
CLASS X (2025-26)

Learning Outcomes

After the completion of the course, like student will be able to:

1. Understand the components of Computer Networking including web servers and network protocols.
2. Explore the functionality and applications of the services available on the Internet.
3. Create simple web pages using various HTML elements
4. Implement links and forms to create user-friendly web pages that facilitate navigation and data collection.
5. Apply basic styling techniques using CSS to improve the visual appearance and layout of web content.
6. Understand the importance of netiquettes, intellectual property rights, and responsible online behaviour

Distribution of Marks and Periods

Unit No.	Unit Name	Marks
1.	Networking	15
2.	HTML	25
3.	Cyber ethics	10
4.	Practicals	50
	Total	100

Unit 1: Networking

- Internet: World Wide Web, web servers, web clients, web sites, web pages, web browsers, blogs, news groups, HTML, web address, e-mail address, downloading and uploading files from a remote site.
- Internet protocols: TCP/IP, SMTP, POP3, HTTP, HTTPS. Remote login and file transfer protocols: SSH, SFTP, FTP, SCP, TELNET, SMTP, TCP/IP.

- Services available on the internet: information retrieval, locating sites using search engines and finding people on the net;
- Web services: chat, email, video conferencing, e-Learning, e-Banking, eShopping, e-Reservation, e-Governance, e-Groups, social networking.
- Mobile technologies: SMS, MMS, 3G, 4G, **5G**

Unit 2: HTML

- Introduction to web page designing using HTML: create and save an HTML document, access a web page using a web browser.
- HTML tags: html, head, title, body, (attributes: text, background, bgcolor, link, vlink, alink), br (break), hr(horizontal rule), inserting comments, h1..h6 (heading),
p (paragraph), b (bold), i (italics), u (underline), ul (unordered list), ol (ordered list), and li (list item). Description lists: dl, dt and dd. Attributes of ol (start, type), ul (type).
- Font tags (attributes: face, size, color).
- Insert images: img (attributes: src, width, height, alt), sup (super script), sub (subscript).
- HTML Forms: Textbox, radio buttons, checkbox, password, list, combobox.
- Embed audio and video in a HTML page.
- Create a table using the tags: table, tr, th, td, rowspan, colspan
- Links: significance of linking, anchor element (attributes: href, mailto), targets.
- Cascading style sheets: colour, background-colour, border-style, margin, height, width, outline, font (family, style, size), align, float.

Unit 3: Cyber ethics

- Netiquettes.
- Software licenses and the open source software movement.
- Intellectual property rights, plagiarism and digital property rights.
- Freedom of information and the digital divide.
- E-commerce: Privacy, fraud, secure data transmission.

4. Lab Exercises

- Create static web pages.

- Use style sheets to enforce a format in an HTML page (CSS).
- Embed pictures, audio and videos in an HTML page.
- Add tables and frames in an HTML page.
- Decorate web pages using graphical elements.
- Create a website using several web pages. Students may use any open source or proprietary tool.
- Work with HTML forms: text box, radio buttons, checkbox, password, list, combo box.
- Write a blog using HTML pages discussing viruses, malware, spam and antivirus
- Create a web page discussing plagiarism. List some reported cases of plagiarism and the consequent punishment meted out. Explain the nature of the punishment in different countries as per their IP laws.

Breakup of marks for the practicals:

S. No.	Unit Name	Marks
1.	Lab Test (20 marks)	
	HTML (design one web page based on a diagram)	20
2.	Report File + viva (20 marks)	
	Report file: At least 10 HTML pages	15
	Viva voce (based on the report file)	5
3.	Project (that uses most of the concepts that have been learnt) (10 marks)	
Total (50 marks)		
