MCA/Gen/9/OEC1: Fundamentals of Information Technology							
Course Type	Course Credit	Contact Hours/Week	Delivery Mode	Maximum Marks		Exam Duration	Assessment Methods
				External	Internal		
Open Elective Theory	04	04	Lecture	70	30	3 Hours	TEE/MTE/ Assignment/ Attendance

Instructions to paper setter for Term-End Examination: The question paper will consist of nine questions in all. First question will be compulsory and will consist of five short questions of 2 marks each covering the whole syllabus. In addition, eight more questions will be set unit-wise comprising of two questions from each of the four units. The candidates are required to attempt four more questions of 15 marks each selecting at least one question from each unit.

Course Objectives: This course is aimed at enabling the students appreciate the working of various parts of a digital computers and peripheral devices interfaced with it apart from computer memory devices and computer programming languages' types/levels.

Course Outcomes	At the end of this course, the students will be able to:
CO1	enumerate various types of computers and its components including memory devices, input devices, output devices; software types; programming languages as also define various terms related to information technology discipline.
CO2	describe the working principles of various types of computers and its components including memory devices, input devices, output devices; software types; programming languages and related terms and concepts.
CO3	apply the information and knowledge gained in daily life for academic, research, entertainment, professional and related fields.
CO4	classify and categorize the data, computers, memory devices, input devices, output devices, computer software and computer languages based on various criteria.
CO5	evaluate and justify their requirement in respect of a computer and related hardware/software and make a leaned decision for procuring a computer.

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Course Content
MCA/Gen/9/OEC1: Fundamentals of Information Technology

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Unit - I	Historical evolution of computers, characteristics of computers, capabilities and limitations of computers. Type of computers based on different criteria like processing power, hardware generations, functions, and data processed Description of the terms: hardware, software and firmware. Applications of computers in different fields of public life, Block diagram of computer, its components and their functions.
Unit - II	Number systems - Binary, octal, decimal and Hexa-decimal, Conversion from one number systems to others, binary arithmetic, Boolean algebra/operations, logic gates and digital logic circuits.
Unit - III	Primary memory, RAM and its types, ROM and its types Cache memory, its function and levels Secondary memory: magnetic storage, optical storage, electronic storage. Input devices used with computer systems Output devices used with computer systems.
Unit - IV	Software its types and functions Application software and its examples System software and its examples. Computer languages and its types. Operating System, its objectives, functions and modules.

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Text/Reference Books

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Text Books	1. Priti Sinha, Pradeep K., Sinha, "Computer Fundamentals: Concepts, Systems & Applications", BPB Publications. 2. V. Rajaraman, "Fundamentals of Computers", PHI.

3. V. Rajaraman, "Introduction to Information Technology", PHI
4. R.K. Taxali "Introduction to Software Packages", Galgotia Publications.

MCA/Gen/9/OEC2   Windows and Office Automation Tools

Course Type	Course Component	Course Credit	Contact Hours/ Week	Delivery Mode	Maximum Marks		Exam Duration	Assessment Methods
					External	Internal		
Open Elective	Theory	03	03	Lecture	50	25	3 Hours	TEE/MTE/ Assignment/ Attendance
	Practical	01	02	Lab	25	-	3 Hours	Practical File/TEE

Instructions to paper setter for Term-End Examination: The question paper will consist of seven questions in all. First question will be compulsory and will consist of five short questions of 2 marks each covering the whole syllabus. In addition, six more questions will be set unit-wise comprising of two questions from each of the three units. The candidates are required to attempt three more questions selecting at least one question from each unit.

Course Objectives: Objective of this course is to make the students familiar with the functioning of the Internet, email, web-browsers, and e-commerce; surfing the Internet and downloading contents therefrom; legal and payment issues in e-commerce.

Course Outcomes	At the end of this course, the student will be able to:
CO1	define: installation, basic elements of windows, features of Word processing, Excel, PowerPoint.
CO2	describe: My computer, control panel, accessories in Windows, MS Word features, toolbars, various styles and tools, excel worksheet, data entry, editing, creating graphs, mathematical and statistical functions and formulas.
CO-3	perform: Windows installation, various tools, tables, charts, template in MS Word, Excel & PowerPoint.
CO4	classify: various tabs in MS Word, Excel, PowerPoint, mathematical and statistical functions and formulas in Excel, format and different operations on tables, PowerPoint elements: templates, wizards, views.
CO5	select: various menu options, tools, dialog boxes, slides and slide shows, Windows accessories, control panel, various layouts, various styles.
CO6	design: effective PowerPoint presentations, document creation & report writing in MS Word, statistical data sheets using Excel.

Course Content
MCA/Gen/9/OEC2   Windows and Office Automation Tools

Unit - I	WINDOWS: Installing WINDOWS starting and quitting WINDOWS Basic Elements of WINDOWS , My Computer, Network Neighbourhood, Sharing Devices, Windows Explorer (Files and Folder Operations), Control Panel, Accessories like Accessibility, Entertainment, Communication, System Tools, Paint Brush, Calculator, Calendar, Clock, Note Pad, Word Pad Etc.
Unit - II	MS-WORD: Basic features of Word Processing, File-New, Open, Save, Print, Close, Page Setup, Edit-Find, Replace, Cut, Copy, Paste etc. View-various layouts, Zooming, Header, Footer, Toolbars, Insert-Various types of objects, Files, Symbols, Date, Time etc, Format-Various Styles, Auto format, Paragraph formatting, Bullets and numbering etc. Tools- Spell Checking, Word Count, Auto Correct, Languages etc, Tables- Insert, Delete, Update, Auto format and different operations on tables, Windows and Help.
Unit - III	EXCEL : Excel worksheet, data entry, editing, cell addressing, ranges, commands, menus, copying & moving cell content, inserting & deleting rows and column, column formats, cell protection, printing, creating, displaying & printing graphs. Mathematical and Statistical Functions and Formulas.
Unit - IV	MS PowerPoint: Introduction, PowerPoint elements -templates, wizards, views, colour schemes. PowerPoint menus options, sub-options, preparing presentation using different tools, working with drawing, templates, dialog boxes, building

	slides and slide shows.
Text/Reference Books	
Text Books	1. "Computer Concepts Windows and MS Office", Vikas Publishing House ISBN : 8125912398 2. "MS Office in NutShell" Vikas Publishing House ISBN : 8125914463 3. Rathbone Andy, "Windows XP for Dummies", IDG Books India (Published : 9/2001), ISBN : 8126502282.
Reference Books	1. Tyler, Denise, "Windows XP Home And Professional Editions" BPB Publications (Published : 9/2001).

MCA/Gen/9/OEC3: Introduction to Cyber Space

Course Type	Course Component	Course Credit	Contact Hours/ Week	Delivery Mode	Maximum Marks		Exam Duration	Assessment Methods
					External	Internal		
Open Elective	Theory	03	03	Lecture	50	25	3 Hours	TEE/MTE/ Assignment/ Attendance
	Practical	01	02	Lab	25	-	3 Hours	Practical File/TEE

Instructions to paper setter for Term-End Examination: The question paper will consist of seven questions in all. First question will be compulsory and will consist of five short questions of 2 marks each covering the whole syllabus. In addition, six more questions will be set unit-wise comprising of two questions from each of the three units. The candidates are required to attempt three more questions selecting at least one question from each unit.

Course Objectives: Objective of this course is to make the students familiar with the functioning of the Internet, email, web-browsers, and e-commerce; surfing the Internet and downloading contents therefrom; legal and payment issues in e-commerce.

Course Outcomes	At the end of this course, the student will be able to:
CO1	define: Internet and its applications, ISP, HTML, Email, Web Browsers, Social Media and E-commerce.
CO2	explain: internet, intranet, internet service provider, HTML, structure and working of email, configuration of mail client like Outlook Express with mail server, functionality of web browsers, social media and concept of E-commerce.
CO-3	illustrate: internet and its applications, evolution of internet, structure of HTML, various tags with their uses in HTML, structure and working of email, concept and use of different type of web browser, searching and downloading from websites, use of social media and introduction to E-commerce
CO4	categorize: applications of internet, ISP, HTML elements, email messaging, function of web browsers, searching software's, various social media networks, their impact and issues and concept of e-commerce with payment issues.
CO5	compare: internet and intranet, different internet service providers on the basis of their service, email advantages and disadvantages, working of various web browsers and social media types.
CO6	design: various types of HTML application with the help of different elements along with their attributes and development of webpages.

Course Content **MCA/Gen/9/OEC3: Introduction to Cyber Space**
Unit - I	Basics of internet and Intranet, Applications of Internet, Evolution of Internet, Internet Service Provider (ISP). Introduction to HTML, Structure of HTML, Web Page, Head and Body Sections, General structure of HTML tags-starting and ending a tag, various text formatting tags in HTML, Adding images, audio and video objects, Hyper linking.
Unit - II	Email: Basic Introduction, Advantages and Disadvantage, Structure of an E-Mail Message, Working of E-Mail (sending & receiving messages), Managing Email (creating new folders, deleting messages, forwarding messages, filtering messages), Configuration of Outlook Express.
Unit - III	Introduction to the Functionality of Web Browsers: Internet Explorer, Netscape Navigator Concept of WWW, surfing through web sites. Web Browsing (opening, viewing, saving a web page and book mark). Searching and

	downloading of different sites and software.
Unit - IV	Introduction to Social Media: Twitter, Facebook, YouTube, Whatsapp, LinkedIn, their advantages/disadvantages and issues. Introduction to E-commerce, its history, advantages, challenges, payment issues, legal issues.
Text/Reference Books	
Text Books	4. Ritendra Goel, "e-commerce", New Age International Publisher, 2008 5. Dougals E. Comer, "Computer Network and Internet", Pearson, 2008 6. Thomas A. Powell, "HTML - The Complete Reference", Tata McGraw-Hill, ISBN: 0074633325 7. Khurana R., "HTML", APH Publishing
Reference Books	1. Oliver Heathcote, "Internet Right From The Start" BPB Publications

MCA/Gen/9/OEC4: Information Technology for Lifelong Learning								
Course Type	Course Component	Course Credit	Contact Hours/ Week	Delivery Mode	Maximum Marks		Exam Duration	Assessment Methods
					External	Internal		
Open Elective	Theory	03	03	Lecture	50	25	3 Hours	TEE/MTE/ Assignment/ Attendance
	Practical	01	02	Lab	25	-	3 Hours	Practical File/TEE

Instructions to paper setter for Term-End Examination: The question paper will consist of seven questions in all. First question will be compulsory and will consist of five short questions of 2 marks each covering the whole syllabus. In addition, six more questions will be set unit-wise comprising of two questions from each of the three units. The candidates are required to attempt three more questions selecting at least one question from each unit.

Course Objectives: This course is aimed at empowering students in the internet and related fields,e-Learning and online content writing, moodles, ethical and legal issues in computing profession and preparing technical presentations and plagiarism detection.

Course Outcomes	At the end of this course, the student will be able to:
CO1	list: social media plateforms, online learning tools; define: internet,blogs,social media,e-learning, e-content,cyber security ,IPR.
CO2	give examples of online searching, online learning, social media ,cyber crimes. explain: cyber safety ,cyber privacy, cyber security ,IPR.
CO3	use: different social media to post his/her data, internet to post blogs, MOOCs.
CO4	categorize: different online learning tools, e-contents, social media.
CO5	compare social media plateform, report writing tools and presentation tools and choose the best suitable one.
CO6	design and develop the new e-content , report and presentation desing.

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Course Content
MCA/Gen/9/OEC4: Information Technology for Lifelong Learning

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Unit - I	Introduction to the Internet & WWW, searching the online content efficiently& safely; social media sites and safety, privacy and other issues in social media access, writing Internet blogs.
Unit - II	Introduction to online learning, e-Learning, and web-based learning; writing content for web-based/online readers; e-content development and delivery; concept of moodle; concepts of MOOCs.
Unit - III	Cyber-crime. cyber-security and Indian cyber-law;intellectual property rights.
Unit - IV	Preparing basic presentations; using basic and advanced presentation designs; Report writing (basic and advanced),

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Text/Reference Books

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Text Books	1. Karen Markey, Online Searching: A Guide to Finding Quality Information Efficiently and Effectively, Rowman & Littlefield, 2019. 2. Ruth Soukup, How To Blog For Profit: Without Selling Your Soul, Life Well Lived Publications. 3. Diane Alkins and Desiree Pinder, E-Learning Fundamentals: A Practical Guide, ATD Press, 2015. 4. Barry G Blundell, Ethics in Computing, Science, and Engineering: A Student's Guide to Doing Things Right, Springer International Publishing, 2020. 5. ShwetaJaswal Vikram Singh Jaswal, Cyber Crime and Information Technology Act 2000, Regal Publications, 2014.

	6. Lewis Fowler, Powerpoint Presentation Design: How to Create an Effective PowerPoint Presentation that Informs, Educates and Inspires Your Audience, Narratus Publishing, 2012.
	7. Netzley, Guide to Report Writing, Pearson Education India, 2010.
	8. Richard Posner, The Little Book of Plagiarism, Pantheon, 2007.
Reference Books	1. Herrington, A Guide to Authentic e-Learning - Connecting with E-learning, Routledge Publishing, 2010.
	2. Kevin Bowyer, Ethics and computing, Wiley-IEEE Press; 2000.
	3. John Bowden, Writing A Report, 9th Edition: How to Prepare, Write & Present Really Effective Reports, Robinson, 2011.