UDVASH
Academic And Admission Care

HSC ICT Full Course

Progressive Batch

Syllabus [Regular Live Class]

Helpline
09 666 77 55 66

Serial no	Subject	Chapter	Lecture
01	Information and Communication Technology	01	03
		02	05
		03	15
		04	08
		05	15
		06	08
		Total Chapters – 06	**Total Lecture - 54**

ICT		
Chapter	**Lecture**	**Lecture-based discussion topics**
Chapter-3 Number System and Digital Device	ICT-01	Number System - history of inventing numbers, types of number systems, non-positional and positional number systems, decimal, binary, octal and hexadecimal number systems.
	ICT-02	Number system conversion, conversion from other number systems to decimal, conversion from decimal to other number systems, conversion of fractions.
	ICT-03	Inter-conversion of number systems other than decimal, conversion with a calculator.
	ICT-04	Binary addition, binary subtraction, signed numbers, 1's complement, 2's complement.
	ICT-05	Code, BCD code, alphanumeric code, EBCDIC code, ASCII code, Unicode, UTF, Bangla Unicode.
	ICT-06	Boolean algebra, Boolean variables and constants, Boolean operators, Boolean theorems, truth table.
	ICT-07	Boolean functions, Boolean equations, logic function simplification, De Morgan's theorem.
	ICT-08	Building Boolean equations from truth tables, logic gates, basic gates, multi-input gates, applications of logic gates.
	ICT-09	Universal gates, special gates, implementing basic gates and other circuits using only NAND gates.
	ICT-10	Implementing basic gates and other circuits using only NOR gates, circuits, and equations.
	ICT-11	Digital Devices - introduction to digital devices, examples of digital devices, building blocks of digital devices, half adder, full adder.
	ICT-12	Implementation of full adder using half adders, parallel binary adder.
	ICT-13	Encoder, decoder.
	ICT-14	Flip-flop, uses of flip-flop, register, counter.
	ICT-15	Creative and MCQ Question solving
Chapter-1 Information and Communication Technology: World and Bangladesh Perspective	ICT-16	World order in the ICT era - global village, communication, employment, education, medical, research, office, residence, business, news, entertainment and social media, cultural exchange, virtual reality. Recent trends in ICT - artificial intelligence, AI models, robotics, Internet of Things, big data, software engineering.
	ICT-17	Space exploration, ICT-based production, defence, biometrics, bioinformatics, genetic engineering, nanotechnology, ethics in ICT use, cyber security, laws against cybercrime, impact of ICT on social life, ICT and economic development, business models.
	ICT-18	Creative and MCQ Question solving
Chapter-4 Introduction to web design and HTML	ICT-19	Concept of web design, hypertext and hyperlink, IP address, domain name, web browser, static and dynamic websites, server and client, types of servers, port.
	ICT-20	Website structure, web page designing, front-end and back-end development, publishing a website.
	ICT-21	HTML - HTML basics, HTML elements, rules for writing elements, document type declaration, head and body sections, parts of a web browser and web page.
	ICT-22	Headings, essential elements, text formatting, lists.
	ICT-23	Hyperlinks, adding images, showing Bangla on a web page.
	ICT-24	Creating tables, borders, cell spacing, cellpadding attributes; rows, span, and colspan.

	ICT-25	div and span elements, style attribute, internal and external CSS.
	ICT-26	Creative and MCQ Question solving
Chapter-2 Communication Systems and Networking	ICT-27	Communication System - concept of communication system, concept of data communication, bandwidth, data transmission methods, data transmission modes, data delivery modes.
	ICT-28	Data communication media, wired media, wireless media, wireless communication system, Bluetooth, Wi-Fi, WiMAX.
	ICT-29	Mobile communication, generations of mobile phones, computer networking - concept of networking, objectives of computer networking, types of networking, network devices, functions of network.
	ICT-30	Network performance, network topology, concept of network layers, OSI model, cloud computing.
	ICT-31	Creative and MCQ Question solving
Chapter-5 Programming Language	ICT-32	Concept of programming, generations of programming languages, translator program, assembler, compiler, interpreter.
	ICT-33	Program design models, structured programming, modular programming, object-oriented programming, program design approaches, computational thinking.
	ICT-34	Problem analysis and IPO model, algorithm, pseudocode, flowchart, flowchart symbols, dry run and trace table.
	ICT-35	Examples of algorithms, flowcharts and trace tables (About general mathematical problems & conditionals)
	ICT-36	Python Programming - programming environment, first program, variables, data types, input and output, type casting.
	ICT-37	Operators, arithmetic operators, comparison operators, logical operators, indentation, conditional logic and control flow.
	ICT-38	Concept and necessity of loops, for loop, range() function, while loop, infinite loop.
	ICT-39	Loop control, break and continue, loop patterns.
	ICT-40	Nested loops, combinations of loops, examples of nested loops.
	ICT-41	Data structures - lists, indexing and slicing, list operations, loops and patterns on lists, tuples.
	ICT-42	Strings, string operations and methods, string traversal, CSV data processing, palindrome checking.
	ICT-43	Dictionary, iterating over a dictionary, frequency counting, set, choosing between list, dictionary and set.
	ICT-44	Function, defining and calling a function, parameters and arguments, return statement, function contract, scope of function.
	ICT-45	File, writing to a text file, reading from a text file, data processing pipeline, CSV file and data analysis.
	ICT-46	Creative and MCQ Question solving
Chapter-6 Database Management system	ICT-47	Database management - data, information and database, database management system, computer memory and files, main functions of DBMS, types of database.
	ICT-48	Uses of DBMS, corporate database, database in government organizations.
	ICT-49	Table header and table body, record, field, value, data type, null value.
	ICT-50	Relational database, Features of RDBMS, popular relational databases, primary key, composite key, foreign key.
	ICT-51	Database relations, SQL, DDL and DML.
	ICT-52	Creating a database (practical) - SQLite, creating tables, storing and reading data, deleting and updating data, joining multiple tables.
	ICT-53	Data security, data encryption, transactions and ACID properties, NoSQL and big data.
	ICT-54	Creative and MCQ Question solving

দেশব্যাপী উদ্ভাস-উন্মেষ এর
শাখাসমূহের বিস্তারিত ঠিকানা
দেখতে QR কোডটি স্ক্যান করো

উদ্ভাস-উন্মেষ এর
App ডাউনলোড করতে
QR কোডটি স্ক্যান করো