

Subject: Computer Science 2019-2020

Scheme of work/Term wise syllabus breakup

Class Level: 10

**Term 1**

Strand	Unit	Topic	Objective	Week
	<ul style="list-style-type: none"><li>Logic Gates</li></ul>	<ul style="list-style-type: none"><li>Logic Gates</li></ul>	<ul style="list-style-type: none"><li>The functionalities of basic logic gates along with their truth tables. (AND, OR, NOT, NAND , NOR and XOR)</li><li>Logic circuit building using Boolean expression.</li><li>Logic circuit building using logic statement.</li><li>Truth table and simplification of logic circuit.</li><li>Logic circuit solving using building blocks.</li></ul>	1-5
	<ul style="list-style-type: none"><li>Communication and internet technologies</li></ul>	<ul style="list-style-type: none"><li>Communication and internet technologies</li></ul>	<ul style="list-style-type: none"><li>The use and purpose of different data transmission methods.</li><li>The use and purpose of different error checking methods. (Parity Checking, Checksum, ARQ, Echo check)</li></ul>	6-7
	<ul style="list-style-type: none"><li>internet principal of operation</li></ul>	<ul style="list-style-type: none"><li>internet principal of operation</li></ul>	<ul style="list-style-type: none"><li>Describe the use and benefits of Browser.</li><li>Describe the role of ISP.</li><li>The use and purpose of IP and MAC.</li><li>Types of MAC Addresses and their use.</li><li>HTML structure, Presentation and HTTPS use.</li></ul>	8-9
	<ul style="list-style-type: none"><li>Operating systems and computer architecture</li></ul>	<ul style="list-style-type: none"><li>Operating systems and computer architecture</li></ul>	<ul style="list-style-type: none"><li>Describe the use, types and need of OS.</li><li>Functionalities of OS.</li><li>The use of interrupts and buffers.</li><li>Von-Newman architecture components and their functionalities along with Data, control and address bus.</li><li>Explanation of Fetch-Execute cycle.</li></ul>	10-12
	REVISION			13 -14

**Term 2**

Strand	Unit	Topic	Objective	Week
	<ul style="list-style-type: none"> <li>Security and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>Security and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>Describe the need of keeping data safe from accidental loss and corruption.</li> <li>The cause and preventions of data loss and corruption.</li> <li>The causes and Preventions of different security risks (Hacking, Cracking, Virus, Phishing, Pharming, etc.)</li> <li>The use , purpose and applications of security protocols (SSL and TLS)</li> <li>Symmetric and Asymmetric encryption.</li> <li>The need of security and ciphering.</li> <li>Computer Ethics ( Copyrights, Plagiarism etc)</li> <li>Difference between Free software, freeware and shareware.</li> </ul>	1-7
	<ul style="list-style-type: none"> <li>Problem Solving and Design</li> </ul>	<ul style="list-style-type: none"> <li>Problem Solving and Design</li> </ul>	<ul style="list-style-type: none"> <li>How to produce algorithms.</li> <li>The use of sequence, selection and repetition in pseudocodes and flowcharts.</li> <li></li> </ul>	8-10
	<ul style="list-style-type: none"> <li>Pseudocodes and Flowcharts</li> </ul>	<ul style="list-style-type: none"> <li>Pseudocodes and Flowcharts</li> </ul>	<ul style="list-style-type: none"> <li>Pseudocodes and Flowcharts using conditional statements (IF...THEN...ELSE...ENDIF) (CAS....OF.....OTHERWISE.....ENDCASE) and Loop structure (FOR TO NEXT), WHILE DO ENDWHILE and REPEAT UNTIL.</li> </ul>	11-14
	REVISION			15-16