C. U. SHAH UNIVERSITY
Wadhwan City

FACULTY OF: Computer Science
DEPARTMENT OF: Bachelor of Computer Application
SEMESTER : I
CODE: - 4CS01BCB1
NAME: Computer Basics & Organization

Teaching and Evaluation Scheme

Sr. No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester							
								Theory				Practical			Total Marks
								Sessional Exam		University Exam		Internal		Uni	
			Th	Tu	Pr	Total		Marks	Hrs	Mark	Hrs	Pr	TW	Pr	
3	4CS01BCB1	Computer Basics & Organization	4	-	2	6	5	30	1.5	70	3	30	20	-	**150**

Objectives: To enable the student to learn number system, computer codes, hardware
Pre-requisites: Student should have knowledge about computer
Course Outline:

Ch. No	Chapter Name	Course Contents	Lect. Hours
1	Number System and Computer Codes:	➢ Introduction to Number System and types o Binary o Octal o Decimal o Hexadecimal ➢ Conversion of Numbers: o Decimal to Binary, Octal, Hexadecimal o Binary to Decimal, Octal, Hexadecimal o Octal to Decimal, Binary, Hexadecimal o Hexadecimal to Decimal, Binary, Octal ➢ 1's complement ➢ 2's complement ➢ Binary Addition ➢ Binary Subtraction ➢ ASCII code ➢ EBCDIC code ➢ Bit, Nibble and Byte	8
2	Introduction to Computer	➢ Introduction to Computer ➢ Components/Architecture/Block Diagram of	8

		Computer ➢ Advantage and Disadvantage of Computer ➢ Generation of Computers ➢ Characteristics of Computer ➢ Categories/Type of Computers o Analog o Digital o Mini o Micro o Mainframe o Super o Hybrid ➢ Bus and its types o Address o Control o Data	
3	Input/output Devices	➢ Introduction ➢ Input Device o Keyboard o Mouse o Scanner o Trackball o Joystick o Touch screen o Light Pen o Biometric ➢ Output Device o Printer Impact • Dot matrix • Wheel • Drum Non-Impact • Laser • Inkjet • 3-D o Plotter o Display device • CRT • LED • LCD o OMR o OCR o MICR o BCR	10
4	Storage Devices:	➢ Types of Memory o RAM o ROM o PROM o EPROM	8

		○ EEPROM ○ Cache ➢ Magnetic tape ➢ Magnetic disk ➢ CD and DVD ➢ Pen drive ➢ Ports (with Types)	
5	Basic of Gate and Operating System	➢ Logic Gate ○ AND ○ OR ○ NOT ○ NAND ○ NOR ○ EX-OR ○ EX-NOR ➢ Half Adder ➢ Full Adder ➢ Multiplexer ➢ Demultiplexer ➢ Operating System ○ Batch ○ Multiprocessor ○ Multiprogramming ○ Time Sharing ○ Real Time	10
6	Computer Languages and Emerging Technology	➢ Assembler ➢ Compiler ➢ Interpreter ➢ Duplex System ○ Simple ○ Half Duplex ○ Full Duplex ➢ Bluetooth ➢ Wi-Fi ➢ Li-fi ➢ GPS ➢ Wi-max	6
7	CPU & I/O Organization	➢ Stack Organization ➢ Instruction Formats, Addressing modes Asynchronous Data ,Transfer, Modes of Transfer, ➢ Direct Memory Access(DMA)	5
		TOTAL	**55**

Books Recommended:

(1) Computer Fundamentals, by P. K. Sinha, ISBN-13: 978-8176567527, Publisher: BPB
(2) COMPUTER ORGANIZATION AND ARCHITECTURE Kindle Edition, by V.Radhakrishnan, T. Rajaraman, Publisher: PHI
(3) Computer System Architecture – M. Morris Mano
(4) Computer Organization & Architecture – William Stallings, 4th Ed.