C. U. SHAH UNIVERSITY, WADHWAN CITY.

Faculty of: **Computer Science**
Course: **Bachelor of Science Information Technology**
Semester**: I**
Subject Code**: ITM202-1C**
Subject Name: **COMPUTER ORGANIZATION & STRUCTURE**

Sr. No	Category	Subject Code	Subject Name	Teaching hours/ Week			Credit hours	Credit Points	Evaluation Scheme/ Semester								
									Theory				Practical				Total
									Continuous and Comprehensive Evaluation		End Semester Exams		Internal Assessment		End Semester Exams		
				Th	Tu	Pr			Marks	Marks	Marks	Duration	Marks	Duration	Marks	Duration	
2	MAJOR-II	ITM202-1C	COMPUTER ORGANIZATION & STRUCTURE	4	--	-	4	4	20 20 10	Assignment MCQ Attendance	50	2	--	--	-	-	100

AIM:
To enable the student to learn number system, computer codes, hardware, storage devices etc.

COURSE CONTENTS

UNIT – 1 INTRODUCTION TO COMPUTER (10 Lectures)

- Definition of computer, History of Computer,
- Block Diagram Of Computer, Characteristics of computer,
- Generations of computer, Analog computer,
- Digital Computer, (Mini, Micro, Mainframe, Super), Hybrid computer

UNIT – 2 MEMORY AND STORAGE DEVICE (10 Lectures)

- Types of Memory: RAM, ROM, PROM, EPROM, EEPROM
- Storages Devices: Floppy Disk, Hard Disk (SATA, SSD), CD, DVD, Pen drive
- Cloud Storage (Like Google Drive, OneDrive etc.)
- Mechanism of Storage Devices: Tracks, Sectors, Clusters, Cylinders

UNIT – 3 INPUT & OUTPUT DEVICES (10 Lectures)

- Input Devices: Keyboard, Mouse, Scanner, MICR, Micro Phone,
- Barcode Reader, Touch Screen
- Output Devices: Visual Display Unit: CRT, LCD, Plasma Displays, LED
- Printers: Impact (Daisy Wheel, Dot Matrix printer), Non-Impact (Ink-Jet, Laser) , Plotters

UNIT – 4 NUMBER SYSTEM AND CODES **(10 Lectures)**

- **Types of Various Units of Memory**:
  Bit, Nibble, Byte, Kilo Byte, MegaByte, Giga Byte,
  Tera Byte, Peta Byte, Exa Byte, Zetta Byte, Yotta Byte

- **Conversion of Numbers:**
  - Binary to Octal, Decimal and Hexa-Decimal
  - Decimal to Binary, Octal and Hexa-Decimal
  - Octal to Binary, Decimal and Hexa-Decimal
  - Hexa-Decimal to Binary, Octal and Decimal
- Types of Codes: ASCII,BCD, EBCDIC / Unicode

UNIT – 5 EMERGING TECHNOLOGY **(05 Lectures)**

- Bluetooth, Infrared, Wi-Fi, Li-fi, Wi-max, GPS

Arrangement of lectures duration and practical session as per defined credit numbers:

Units	Lecture Duration (In Hrs.)		Calculation of Credits (In Numbers)		Total Lecture Duration	Credit Calculation
	Theory	Practical	Theory	Practical	Theory+ Practical	Theory+ Practical
Unit – 1	10	00	4	0	10	4
Unit – 2	10	00			10	
Unit – 3	10	00			10	
Unit – 4	10	00			10	
Unit – 5	05	00			05	
TOTAL	45	00	4	0	45	4

Evaluation:

Theory Marks	Practical Marks	Total Marks
100	**00**	**100**

REFERENCE BOOKS:

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

SWAYAM/NPTEL Link: https://onlinecourses.swayam2.ac.in/cec21_cs15/preview