

MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR

BACHELOR OF COMPUTER APPLICATION (BCA Annual Scheme)

(To be offered in affiliated colleges from session 2016-17)

- 1. Duration of the Course :** The BCA (AnnualScheme)course will be of three years duration. Each year will be approximately 10 months (minimum 180 working days) duration.
- 2. Medium of Instruction :** The medium of instruction and examination shall be English.
- 3. Eligibility :** The candidate must have passed 10+2examinations with at least 50% marks in aggregate (Pass marks for SC/ST candidates or as per Govt rules)

BCA 106: Computer Organization

UNIT-I

Overview of electronics:

Electronic components – Register, Capacitor and Inductors, Semiconductor devices – Diodes, Transistors (BJT and FET). Analog vs Digital electronics, Transistor as a switch. Integrated circuits, SSI, MSI, LSI, and VLSI circuits. Multivibrators – astable, bistable, monostable, counters ripple and decade, edge and level triggering.

UNIT-II

Building blocks of computer system:

Basic building blocks – I/O, Memory, ALU and its components, Control Unit and its functions, Instruction –word, Instruction and Execution cycle, branch, skip, jump and shift instruction, Operation of control registers; Controlling of arithmeticoperations;

UNIT-III

Addressing techniques and registers:

Addressing techniques – Direct, Indirect, Immediate, Relative, Indexed addressing and paging. Registers – Indexed, General purpose, Special purpose, overflow, carry, shift, scratch, Memory Buffer register; accumulators; stack pointers; floating point; status information and buffer registers.

UNIT-IV

Memory:

Main memory, RAM, static and dynamic, ROM, EPROM, EEPROM, EAROM, Cache and Virtual memory.

UNIT- V

Interconnecting System components:

Buses, Interfacing buses, Bus formats – address, data and control, Interfacing keyboard, display, auxiliary storage devices and printers. I/O cards in personal computers.

Introduction to Microprocessors and Microcontrollers: introduction to 8085 micropocesor, examples of few instructions to understand addressing techniques. Difference between microprocessor andmicrocontrollers.

Recommended Books

1. Andrew S. Tanenbaum , Structured Computer Organization,PrinticeHall
2. William Stallings, Computer Organization and Architecture , Sixth Edition, Pearson