



TRIPURA UNIVERSITY

(A Central University)

Suryamaninagar

SYLLABUS

OF

Computer Science

(Major)

Semester-I

Year 2014

Computer Science (Major)
Semester I
Paper – H I
Fundamentals of Computing
Marks – 100 (80 + Internal 20)

Unit 1:

Introduction to Computer and Problem Solving: Information and Data application, Computer generations.

Number systems and Codes: Number representation: Weighted codes, Non-weighted codes, Binary, Octal, Hexadecimal, Binary Coded Decimal (BCD), Conversion of bases. Complement notations, Binary Arithmetic, Fixed and floating point representation.

Unit 2:

Programming language, Problem solving using computer

Unit 3:

Basic Computer Organization - IAS Computer, Von Neumann Computer, System Bus, Instruction Cycle, Data Representation, Machine instruction and Assembly Language, CPU Organization, Arithmetic and Logic Unit, Control Unit, CPU Registers, Instruction Registers, Program Counter, Stack Pointer.

Memory: Types of memory, RAM, ROM, EPROM, DRAM, SRAM, SAM, Associative Memory.

Unit4:

Basics of Internet, Different network type, PC based network, Features of Internet and component of Internet, Cyber laws Internet security, Concept of Servers and clients.

Text Books:

1. Computer Fundamentals
Author: P.K. Sinha
BPB Publishers
2. Fundamentals of Computer
Author: V. Rajaraman
PHI Learning Pvt. Ltd.
3. How to solve it By Computer
Author: R. G.Dromey

Reference Books:

1. M. M. Mano, Digital Logic and Computer Design, PHI
2. M. M. Mano, Computer System Architecture, PHI