Course Structure for B.Sc. with Information Technology (IT) as a Subject:

Semester	Course Type	Course Code	Title of the Course	Credits		
				Theory	Practical	Tutorial
1st Semester	CORE	BIT120C1	Basics of Information Technology	4	2	0
2nd Semester	CORE	BIT220C1	Programming in 'C'	4	2	0
3rd Semester	CORE	BIT 320C1	OOPS using 'C++'	4	2	0
4th Semester	CORE	BIT420C3	Software Engineering	4	2	0
5th Semester	DSE	BIT520C1 / D1A / D2A	DBMS / Dot Net Technologies / PHP	4	2	0
6th Semester	DSE	BIT620C1 / D1B / D2B	Core Java Programming / Cloud Computing / Unix & Shell programming	4	2	0

B. Sc. IT (HONS.) 2020: 1st Semester				
Course	**Credits-06**		**Total Marks- 90**	
	Theory	**Practical**	**Theory**	**Practical**
BIT120C1: INFORMATION TECHNOLOGY: BASICS OF INFORMATION TECHNOLOGY	04	02	**60**	**30**

THEORY (4 CREDITS;   **MAX. MARKS: 60**   **MIN. MARKS: 24**

UNIT-I: Basics of Computer

Introduction to Computer: Characteristics of Computers, Evolution of Computers, Types and Classification. Application of computers.
Block Diagram of a computer, Description of Input Unit, Output Unit, Storage Unit, Central Processing Unit, Arithmetic Logic Unit, Control Unit.

UNIT-II: Computer Software
What is Software? Relationship between Hardware and Software
Types of Software: System Software, Application Software, Firmware, Functions of System Software.
Type of System Software: Operating Systems, Language Translators, Utility Programs, Communications Software.
Commonly Used Application Software: Word Processing, Spreadsheet, Database, Graphics Personal Assistance, Education, Entertainment Software.
Overview of Computer Languages-Machine level language, assembly level language, high level language

UNIT-III: Number System and Data Information Concepts

Positional Number System: Decimal, Binary, Octal, Hexadecimal, conversion from one Number system to another.
Computer Codes: BCD, EBCDIC, ASCII, UNICODE, Gray Code.
Data and information concepts: Information processing, need for information, characteristics of information, categories of information, information systems, and types of information system.

UNIT-IV: Advanced Trends in IT

Definitions: Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Social Networking, Cloud Technology, Virtual LAN Technology, Firewall, M-Commerce, Nanotechnology, Virtual Reality, BPO and KPO, Social and Ethical Issue YouTube, Facebook, Linkedin, Orkut
Internet technology & World Wide Web: World Wide Web, Web browsers, Internet addresses, Domain names, Web Search engines, electronic mail and voice mail.

PRACTICAL: 2 CREDITS;   **MAX. MARKS: 30**   **MIN. MARKS: 12**

Note: *The Practical Component shall be based on the Unit-I to Unit-IV*

SUGGESTED READING:

1) Peter Nortorn's "Introduction to Computer", TMH, 2004, ISBN-0-07-05-3142-0
2) Chetan Shrivastava "Fundamentals of Information Technology", Kalyani publishers, 2002,
3) Dr Madhulika Jain, "Information Technology Concept", BPB, 2006, ISBN – 81-7656-276-9
4) Alexis and Mathews Leon, "Fundamentals of Information Technology", Leon Press, ISBN
5) "Computer Fundamentals" by P.K. Sinha
6) "Fundamentals of Computers", 3rd Edition V. Rajaraman