



ARSD College, University of Delhi

Lesson Plan

Course Name : BA (Computer Applications)						
Semester	Course Code	Course Title	Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
I	(BACSS01)	Computer Fundamentals	4			
Teacher/Instructor(s)		Dr. V.S. Dixit				
Session		2020-21				

Course Objective:

This course provides an overview of introductory concepts about computers, number systems and components of computer system. It builds the foundation of the computer application courses that follow.

Course Learning Outcomes:

On successful completion of this course, a student will be able to: 1. handle a computer system for day to day use. 2. enumerate different types of input/ output devices and types of memory. 3. perform basic arithmetic operations using different number systems including binary arithmetic. 4. differentiate between system and application software. 5. prepare documents / spreadsheets.

Lesson Plan:

Unit	Learning Objective	Lecture	Topics to be covered
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No.		No.	
1.	Introduction to Computers	1-7	Basic Computer Organization, Characteristics of computers, uses of computers, components of a digital computer, types of computers.
		2.	
		3.	
		4.	
		5	
		6	
		7	
2.	Number Systems	8-13	Binary, Octal and Hexadecimal number systems, Binary Coded Decimals (BCD), Binary Coded Octals (BCO), Binary Coded Hexadecimals (BCH), 1's complement, 2's complement, conversion from one number system to another, binary arithmetic (addition, subtraction), binary subtraction using 2's complement.
		9	
		10	
		11	
		12	
		13	
3.	Input and Output Devices and memory	14-19	Keyboard, mouse, touch screen, joystick, scanner, web camera, MICR, OCR, OMR, bar-code reader, monitor, printer, plotter. Memory: Primary, secondary, auxiliary memory; RAM, ROM, cache memory, magnetic tape, magnetic disks, hard disk drives, optical disks, CD-R, DVD, flash drives, blue ray disc.
		15	
		16	
		17	
		18	

		19	
4.	Computer Organization and Architecture:	20-26	C.P.U., registers, system bus, main memory unit, processors, motherboard, ports and interfaces, expansion cards, ribbon cables, SMPS, memory chips.
		21	
		22	
		23	
		24	
		25	
		26	
5.	Software	27-34	System software, application software, operating system and its functions and types.
		31	
		32	
		33	
		34	
6.	Overview of Emerging Technologies	35-48	Bluetooth, cloud computing, big data, data mining, mobile computing.

Evaluation Scheme:

No.	Component	Duration	Marks
1.	Internal Assessment		25
	• Quiz		
	• Class Test		
	• Attendance		
	• Assignment		
2.	End Semester Examination	3 hr	75

Details of the Course		
Unit	Contents	Contact Hours

1	Characteristics of computers, uses of computers, components of a digital computer, types of computers.	8
2	Binary, Octal and Hexadecimal number systems, Binary Coded Decimals (BCD), Binary Coded Octals (BCO), Binary Coded Hexadecimals (BCH), 1's complement, 2's complement, conversion from one number system to another, binary arithmetic (addition, subtraction), binary subtraction using 2's complement.	8
3	Keyboard, mouse, touch screen, joystick, scanner, web camera, MICR, OCR, OMR, bar-code reader, monitor, printer, plotter. Memory: Primary, secondary, auxiliary memory; RAM, ROM, cache memory, magnetic tape, magnetic disks, hard disk drives, optical disks, CD-R, DVD, flash drives, blue ray disc.	8
4	Computer Organization and Architecture: C.P.U., registers, system bus, main memory unit, processors, motherboard, ports and interfaces, expansion cards, ribbon cables, SMPS, memory chips.	8
5.	Software: System software, application software, operating system and its functions and types.	8
6.	Overview of Emerging Technologies: Bluetooth, cloud computing, big data, data mining, mobile computing.	20
	Total	60

Suggested Books:

<i>Sl. No.</i>	<i>Name of Authors/Books/Publishers</i>	<i>Year of Publication/Reprint</i>
-1	Goel, A. (2010). Computer Fundamentals. New Delhi: Pearson Education	2010
2	Rajaman, V., & Adabala, N. (2015). Fundamentals of Computers (6th Edition). New Delhi: Prentice Hall of India Pvt. Ltd.	2015
3	Sinha, P.K. (2004). Computer Fundamentals (6 th Edition). New Delhi: BPB Publications	2004
4	Thareja, R. (2014). Fundamentals of Computers. Oxford University Press.	2014

<i>Mode of Evaluation:</i>	<i>Internal Assessment / End Semester Exam</i>
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Dr. V.S. Dixit

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