

**Course: Bachelor of Computer Application**  
**(As per GU-FYUGP)**

**Paper name: Computer Fundamentals**

**Paper Code: CIT0100104**

**Course Instructor: Manisha Deka**

**Paper Credit: 3+1 (T+P)**

**Period: August 2023 – December 2023**

**Total number of classes required as per syllabus = 60(45T + 15P)**

**Theory (T) - 45 Hours**

**Practical (P) – 30 Hours**

Lecture no.	Topics	Mode of Teaching	Assessment method
<b>Unit I: Introduction to Computers and number systems</b>			
1, 2	Number system, decimal, binary, octal and hexadecimal number system	Class room teaching in ICT enabled class room.	Quiz, Class Test and Sessional Examination  (Syllabus for Sessional Exam-1)
3, 4, 5	Conversion among number systems		
6	Definition of computer, basic components of computer		
7	Bus, evolution of computers		
8	Generations of computers, classification of computers		
9	Data representation in a computer		
10	ASCII, Unicode		
<b>Unit II: Memory and storage devices</b>			
11	Memory, memory hierarchy	Class room teaching in ICT enabled class room. Lab practice.	Quiz, Class Test and Sessional Examination
12, 13	registers, general purpose and special purpose registers		
14, 15	primary and secondary memory, volatile and non volatile memory, semiconductor memory		
116	SRAM and DRAM		

17, 18	Read Only Memory, magnetic storage devices, optical storage devices		(Syllabus for Sessional Exam-1)
19, 20	Solid state devices, flash memory, storage evaluation criteria		
<b>Unit III: Input devices</b>			
21, 22	Input device, keyboard, keyboard layouts, pointing devices, mechanical and optical mouse, scanner, hand-held and flat-bed scanners	Class room teaching in ICT enabled class room. Lab practice.	Class Test and Sessional Examination  (Syllabus for Sessional Exam-1) Assignment, PPT presentation
23, 24	OMR, OCR, MICR, digital camera, touchpad, trackball, joystick, digitizer, digital microphone		
<b>Unit IV: Output devices</b>			
25, 26	Monitor, LCD, LED, plasma monitor, printers, impact printers, non-impact printers, dot matrix printers	Class room teaching in ICT enabled class room. Lab practice.	Class Test and Problem Solving Assignment, PPT presentation
27, 28	Inkjet printers, laser printers, thermal printers, plotters, voice output systems, projector		
<b>Unit V: Programming languages and Software</b>			
29, 30	CPU, control unit, computer instruction		
31	Instruction set, instruction execution life cycle		
32, 33, 34	Program, programming languages, machine level language, assembly language, low level language, high level language		
35	Language translators, assembler, compiler, interpreter		
36	Algorithm, definition of pseudocode,		
37, 38, 39, 40	Flowchart, flowchart of algorithm to find maximum of n numbers,		Class Test and Problem Solving

	flowchart of algorithm to find minimum of n numbers, flowchart of algorithm to find average of n numbers, flowchart of algorithm to display first n terms of Fibonacci series, flowchart of algorithm to check whether a given number is prime	Class room teaching in ICT enabled class room. Lab Practice.	
41, 42, 43	Software, software, application software, examples of application software, system software, examples of system software		
44, 45, 46	What is operating system, what is device driver, open source software, proprietary vs open source software, examples of proprietary and open source software		
<b>Unit VI: Computer Network and Internet</b>			
47, 48	Computer network, network topologies	Class room teaching in ICT enabled class room.  Lab practice.	Syllabus for Sessional Exam-2)  Assignment
49, 50	LAN and WAN, internet		
51, 52	ISP, services over internet, www, web server, web browser		
53, 54	HTML, HTML tags: <html>, <head>, <title>, <body>, <h1>, <h2>, <h3>, <h4>, <h5>, <h6>		
55, 56, 57	 , <p>, <a>, <ul>, <ol>, <li>, <center>, <table>, <th>, <tr>, <td>		
58	introduction to CSS		
59, 60	domain name, URL, DNS, E-mail, telnet, FTP		

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