Lecture Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa

Name of Faculty: Pooja Naik	**Subject:Computer Science**	
Paper code: CSC-213 Computer Organization	**Program: S.Y.BSC**	**Division:**
Academic year: 2024-25	**Semester: III**	**Total Lectures: 45**

Course Objectives: Conceptualize the basics of Computer Organizational and Architectural issues and classify the computers based upon performance and machine instructions.

Expected Course Outcome: Learn various data transfer techniques and the I/O interfaces.

Student Learning Outcome: Understand the basics of ALU implementation, hardwired and microprogrammed control unit, pipelining and parallel architectures

Month	Lecture From To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
July 2024	01/07/2024 To 06/07/2024	03	Introduction to Logic Gates and Boolean Algebra: Logic Gates, Boolean Algebra	Practice Problems at home	LCD Projector	1. William Stallings, "Computer Organization and Architecture : Designing for performance", 9th Edition, Prentice Hall of India.
July 2024	08/07/2024 till 13/07/2024	03	Combinational circuits, Karnaugh Map	Practice Problems at home	LCD Projector	1. William Stallings, "Computer Organization and Architecture : Designing for performance", 9th Edition, Prentice Hall of India.
July	15/07/2024	03	Data representation: Data Type Representation,			

2024	till 20/07/2024		Number System,			
July 2024	12/07/2024 till 27/07/2024	03	Signed number ,fixed, floating point,	Practice Problems at home	LCD Projector	
July 2024	29/07/2024 till 31/07/2024	02	character representation, Addition, Subtraction	Practice Problems at home	LCD Projector	
Aug 2024	01/08/2024 till 03/08/2024	02	Multiplication - Shift and Add, Booth's Algorithm,	Practice Problems at home	LCD Projector	
Aug 2024	05/08/2024 Till 10/08/2024	03	Division Pseudocode:definition and its attributes,constructs and examples	Practice Problems at home	LCD Projector	
Aug 2024	12/08/2024 till 17/08/2024	03	Memory Hierarchy: Hierarchical memory organization, Types of Memory-internal and external.	Practice Problems at home	LCD Projector	
Aug 2024	19/08/2024 till 24/08/2024	03	, Cache memory, Memory interleaving. Introduction to Computer Architecture	Practice Problems at home	LCD Projector	1. William Stallings, "Computer Organization and Architecture : Designing for performance", 9th Edition, Prentice Hall of India.
Aug 2024	26/08/2024 till 31/08/2024	03	Flynn's Classification of Computers, Performance Metrics (like Latency, throughput),	Practice Problems at home	LCD Projector	
Sep 2024	02/09/2024 till 05/09/2024	02	Fundamental Blocks of Computer (like CPU, I/O subsystems, memory, control unit)	Practice Problems at home	LCD Projector	
Sep 2024	13/09/2024 till 14/09/2024	01	computer function, interconnection structures, Bus interconnections, Peripheral devices: Types of Peripheral Devices.	Practice Problems at home	LCD Projector	
Sep 2024	16/09/2024 till 21/09/2024	03	I/O subsystem,programmed I/O,	Practice Problems at home	LCD Projector	
Sep 2024	23/09/2024 till 28/09/2024	03	Interrupt-driven I/O, DMA, I/O channels and processors	Practice Problems at home	LCD Projector	

Oct 2024	30/09/2024 till 05/10/2024	03	Instruction Set Architecture (ISA): Introduction to Instruction Set, Types of ISA;	Practice Problems at home	LCD Projector	
Oct 2024	07/10/2024 till 12/10/2024	03	RISC, CISC; Processor Organization, Registers organization, Instruction Execution Cycle, Instruction formats, Addressing Modes.	Practice Problems at home	LCD Projector	1. William Stallings, "Computer Organization and Architecture : Designing for performance", 9th Edition, Prentice Hall of India.
Oct 2024	14/10/2024 till 19/10/2024	03	Register Transfer Language (RTL), Assembly Language Programming, X86 -Architecture, ARM Architecture	Practice Problems at home	LCD Projector	
Oct 2024	21/10/2024 till 22/10/2024	02	**Revision**	Practice Problems at home		

*** Assessment Rubrics**

Component	Max Marks
ISA 1	7.5
ISA 2	7.5
Practical	25
Project	
Semester End Exam	60

Semester Lecture Plan

Name of the college: Government College of Arts, Science and Commerce, Sanquelim Goa.

Name of Faculty: Pooja Bhanudas Naik	**Subject:** Computer Science	
Paper code and Paper name: CSC-213 Computer Organization	**Program/Course: SYBSc**	**Division:**
Academic year: 2024 - 2025	**Semester: III**	**Total Lectures: 45**

Course Objectives: Conceptualize the basics of Computer Organizational and Architectural issues and classify the computers based upon performance and machine instructions.

Expected Course Outcome: Learn various data transfer techniques and the I/O interfaces.

Month	Lectures From:	To:	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/Assignment	ICT Tools	Reference books
July	01/07/2024	06/07/2024	2	Introduction to 8086 architecture and instruction set.	Practice Programs in Lab	Computers in Lab	1. William Stallings, "Computer Organization and Architecture : Designing for performance", 9th Edition, Prentice Hall of India.
July	08/07/2024	13/07/2024	2	Find the sum of 1 + 2 + 3 Check if number is even or odd,positive or negative	Practice Programs in Lab		
July	15/07/2024	20/07/2024	2	Display the multiplication table of a number . Store and retrieve numbers from memory.	Practice Programs in Lab	Computers in Lab	
July	22/07/2024	27/07/2024	2	Display the multiplication table of a number . Store and retrieve numbers from memory.	Practice Programs in Lab	Computers in Lab	
August	29/07/2024	03/08/2024	2	Block transfer			

				Block transfer in reverse order.		
August	05/08/2024	10/08/2024	2	Block transfer Block transfer in reverse order.	Practice Programs in Lab	Computers in Lab
August	12/08/2024	16/08/2024	2	Sort numbers in memory.(Any two methods) Searching Methods.	Practice Programs in Lab	Computers in Lab
August	19/08/2024	24/08/2024	2	Sort numbers in memory.(Any two methods) Searching Methods.	Practice Programs in Lab	Computers in Lab
August	26/08/2024	30/08/2024	2	Sort numbers in memory.(Any two methods) Searching Methods.	Practice Programs in Lab	Computers in Lab
September	02/09/2024	05/09/2024	2	Masking of Bits. Counting of number of bits.	Practice Programs in Lab	Computers in Lab
September	16/09/2024	20/09/2024	2	Masking of Bits. Counting of number of bits.	Practice Programs in Lab	Computers in Lab
September	23/09/2024	27/09/2024	2	Count number of even or odd numbers from a given set of numbers. Check if a number is palindrome.	Practice Programs in Lab	Computers in Lab
September	29/09/2024	05/10/2024	2	Count number of even or odd numbers from a given set of numbers. Check if a number is palindrome.	Practice Programs in Lab	Computers in Lab

October	07/10/2024	12/10/2024	2	Count the number of positive and negative numbers from a given set of numbers. Generate a series like 1,3,5,7….upto n terms.	Practice Programs in Lab	Computers in Lab	
October	14/10/2024	19/10/2024	2	Count the number of positive and negative numbers from a given set of numbers. Generate a series like 1,3,5,7….upto n terms.	Practice Programs in Lab	Computers in Lab	

***Assessment Rubrics**

Component	**Max Marks**
ISA 1	7.5
ISA 2	7.5
Practical	25
Project	-
Semester End Examination	60