



Name of the Examination: WIN 2023-2024 – CAT-1

Course Code: ECE2015

Course Title: Computer Organization and Architecture

Set number: 3

Date of Exam: 05/02/2024 (Fri) (AI)

Duration: 90 Min

Total Marks: 50

Instructions: All questions are compulsory

Q1 Discuss Moor's law and its significance.

Q2 Discuss the IAS computer register transfer operation for the given ALP:

Memory Location	Data/Instruction
00A H	LOAD M(00C H), ADD M(00D H)
00B H	STOR M(00C H)
00C H	5
00D H	7

Q3 Write an ALP to perform $Y=A+B+C$ if $A>B$ else $Y=A+B-C$.

Q4. How the computer can distinguish between positive and negative numbers? Discuss with an example.

QP Mapping

Q. No.	Module Number	CO Mapped	PO Mapped	PEO Mapped	PSO Mapped	Marks
Q1	1	CO2	PO1, PO2, PO3			10
Q2	1	CO3	PO1, PO2, PO3, PO5			15
Q3	1	CO3	PO1, PO2, PO3, PO5			15
Q4	2	CO4	PO1, PO2, PO3, PO5			10



Name of the Examination: WIN 2023-2024 – CAT-1

Course Code: ECE2013 Course Title: Computer Organization and Architecture

Set number: 4

Date of Exam: 06/02/2024 (AN)(B2)

Duration: 90 Min

Total Marks: 50

Instructions: All questions are compulsory

Q1 Draw the architecture of the IAS Computer and discuss the function of each block.

Given the memory contents of the IAS computer shown below,

Address	Contents
08A	010FA210FB
08B	010FA0F08D
08C	020FA210FB

show the assembly language code for the program, starting at address 08A. Explain what this program does.

Q3 Perform addition and subtraction of two numbers a and b using Sign magnitude. Also, write an algorithm for that.

Q4. Discuss the key components of a computer and its functions.

QP Mapping

Q. No.	Module Number	CO Mapped	PO Mapped	PEO Mapped	PSO Mapped	Marks
Q1	1	CO2	PO1, PO2, PO3			15
Q2	1	CO3	PO1, PO2, PO3, PO5			15
Q3	1	CO3	PO1, PO2, PO3, PO5			10
Q4	2	CO4	PO1, PO2, PO3, PO5			10