



Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Hingna Road, Wanadongri, Nagpur.

Even Term 2021-2022

25.08.2022

Mid Semester Exam II

Second Semester B.Tech.(AIDS)

AIDS2155 Computer Architecture and Organization

Time: 1 Hr. 30 Min.

Max Marks: 30

Instructions to Examinees

1. All questions are compulsory and figures to right indicate marks allotted, CO & Bloom's Level.
2. Assume suitable data wherever necessary.

Sr. No.	Question & Description		Marks	CO Bloom's Level
Q.1	Solve the following.		10	CO mapped
	[A]	Solve $14 * -5$ using booth's algorithm and fast multiplication techniques.	02+02	CO3(L3)
	[B]	Create the logic circuit for Carry look ahead adder. What are the disadvantages of Ripple Carry adder and how it can be overcome in carry look ahead adder?	06	CO3(L6)
Q.2	Solve the following.		10	CO mapped
	[A]	Explain the circuit arrangement for binary division with diagram and perform the following Division using non-restoring algorithm: $10111 \text{ DIV } 00101$	03+03	CO3(L1)
	[B]	Explain about direct mapping and set associative mapping in cache memory.	04	CO3 (L1)
Q.3	Solve the following.		10	CO mapped
	[A]	Classify the different types of hazards with examples	06	CO4(L2)
	[B]	Compare between DMA & interrupts.	04	CO4(L2)