

Enroll No

K.E. Society's
Rajarambapu Institute of Technology, Rajaramnagar
(An Empowered Autonomous Institute, affiliated to SUK)
Unit Test -I (2025-26)

Q.P. Code
UT 2996

T.Y. B.Tech.-Electronics & Telecommunication Engineering

Course Code: EC3154

Course Name: Computer Architecture and Organization

Day & Date: Wednesday 13/08/2025

Time: 10:30 To 12:30

Max Marks- 25

Instructions:

- 1) All questions are compulsory.
- 2) Figures in rounded () brackets within the question, indicate the scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.
- 3) CO is the index number of the Course Outcome statement.
- 4) The Bloom's taxonomy level (BL) for 1,2,3,4,5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.
- 5) Assume suitable data if necessary.
- 6) Use of non-programmable calculators is allowed

		Marks	BT Level	COs
Q.1	Solve any two questions			
A	Describe the structure of a computer system by identifying its basic functional units with the help of a neat diagram.	7	1	CO1
B	Demonstrate the role of the Arithmetic Logic Unit (ALU) and outline a simple hardware implementation.	7	2	CO1
C	Compare RISC and CISC architectures. (4 Marks) also, assess the effectiveness of multiprocessor systems in modern computing.	7	2	CO2
Q.2	A List the types of operations and operands used in machine-level instructions.	6	1	CO1
	B Compare different addressing modes. (3 Marks) additionally, explain their advantages in enhancing instruction flexibility.	5	2	CO2
OR				
B	Design an instruction encoding format for a CPU architecture, clearly indicating the opcode and operand fields.	5	2	CO2

