

Enroll No

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

Q.P. Code
UT 3488

Course Code: BC105

Course Name: Computer Architecture

Day & Date: Thursday 16/10/2025

Time: 10:30 AM to 11:30 AM

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

Question Statements			Marks	BT Level	COs
Q.1	A	Explain digital and analog signal, and write any three differences between them.	7	2	1
	B	State the Boolean laws and explain each using truth table.	6	2	1
		OR			
	B	Explain Von Neuman architecture with neat diagram.	6	2	1
Q.2	A	Solve the Boolean expressions using Karnaugh Map (k-map). I. $F(A, B, C) = \sum (1, 3, 5, 7)$ II. $F(A, B, C, D) = \sum (0, 2, 5, 7, 8, 10, 13, 15)$	6	3	1
	B	Sketch logic circuit and write its truth table. I. Half adder II. Full adder	6	3	1
		OR			
	B	Sketch logic circuit and truth table for the following subtractor circuit. I. Half subtractor II. Full subtractor	6	3	1

