



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
(AUTONOMOUS) (Grant-in-Aid)
Affiliated to Sardar Patel University
VALLABH VIDYANAGAR-388120



Bachelor of Computer Applications (Semester 2) External Examination - 2025
US02IDBCA05: Digital Electronics

Date: 10-04-2025, (Thursday)

Time: 02:00 PM to 03:30 PM (1.5 hrs)

Total marks: 25

Q-1 Write the most appropriate answer from the following multiple-choice [05] questions.

- (1) Invert gate has only __input and ____output.
(a) Two, One (b) One, Two
(c) One, One (d) None of these
- (2) An invert gate is also called a _____gate.
(a) NOR (b) NOT
(c) XNOR (d) NAND
- (3) De Morgan's first theorem says that a NOR gate is equivalent to a _____.
(a) Bubbled OR (b) Bubbled NOR
(c) Bubbled AND (d) Bubbled NAND
- (4) The truth table for an R-S Flip-Flop has how many VALID entries?
(a) 3 (b) 2
(c) 1 (d) 4
- (5) In D flip-flop, D stands for _____.
(a) Distant (b) Delay
(c) Desired (d) Data



Q-2 What is logic gate? Draw electronic symbol and explain AND, OR, and NOT gates [10] with truth table.

OR

Q-2 Explain NOR, NAND, XOR, and XNOR gates with truth table [10]

Q-3 Explain what is Latch and Flip-Flop and also differentiate them. [10]

OR

Q-3 Explain Left-Shift and Right-Shift register with diagram. [10]

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