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Roll No.

188543

Level 4, 2nd Sem / DVOC (Medical Imaging Tech., SD)
Subject : Digital Electronics

Time : 2 Hrs.

M.M. : 50

SECTION-A

Note:Multiple Choice questions. All questions are compulsory. (5x1=5)

Q.1 The Binary number 10101 is equivalent to Decimal number.

- a) 19
- b) 12
- c) 27
- d) 21

Q.2 The output expression for a two input logic gate is $Y=A \cdot B$. The gate is

- a) OR Gate
- b) AND Gate
- c) NOT Gate
- d) NOR Gate

Q.3 $X + 1 = \underline{\hspace{2cm}}$

- a) X
- b) 0
- c) 1
- d) \overline{X}

Q.4 Shift register is a combination of _____

- a) Flip Flops
- b) Counters
- c) Encoders
- d) Decoders

Q.5 A half adder can add _____ number of bits.

- a) 1
- b) 2
- c) 3
- d) 4

SECTION-B

Note: Objective type questions. All questions are compulsory. $(5 \times 1 = 5)$

Q.6 A _____ signal varies continuously with time.

Q.7 An 8:1 multiplexer has _____ input select lines.

Q.8 A 4-bit counter can count _____ no. of events.

Q.9 LCD stand for _____.

Q.10 Inverter is also known as _____ gate.

SECTION-C

Note: Short answer type questions. Attempt any six questions out of Eight questions. $(6 \times 5 = 30)$

Q.11 What are the advantages of digital signal over analog signal?

Q.12 Explain De Morgan's theorem.

Q.13 Differentiate between latch and flip flop.

Q.14 Explain full adder with circuit diagram.

Q.15 Write a note on SSI, MSI, LSI and VLSI.

Q.16 Explain SR Flip Flop.

Q.17 Explain 4:1 MUX with diagram.

Q.18 Explain principle and working of LCD display.

SECTION-D

Note: Long answer type questions. Attempt any one questions out of two questions. $(1 \times 10 = 10)$

Q.19 Explain in detail the working of 3 bit counter with diagram.

Q.20 What are logic gates? Explain all logic gates with symbol and Truth Table.