Q.19 Explain SIPO with block diagram.

Q.20 Write any five differences between Static and Dynamic memories.

Q.21 Explain RAM.

Q.22 State and Explain Demorgan's theorem.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Simplify using K-map and realize the circuit using NAND gates.

$Y=\Sigma m\,(0,1,3,4,5,8,9,12,13)$

Q.24 Explain the working of Asynchronous Decade Counter with the help of pulse diagram and truth table.

Q.25 Explain the working of Successive Approximation type Analog to Digital Converter with circuit diagram.

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3rd Sem / Branch : Automation & Robotics
Subject:- Digital Electronics

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 A byte represents

a) Seven bits b) Eight bits

c) Six bits d) Nine bits

Q.2 Which of the following gates can be used as an inverter?

a) AND b) NAND

c) OR d) None of the above

Q.3 According to Associative Law of multiplication

a) A+B=B+A b) A(BC)=(AB)C

c) C=CC d) None of the above

Q.4 A full Adder can add_____bits.

a) 2 b) 4

c) 3 d) 5

Q.5 1:8 DEMUX has_____select lines.

a) 5 b) 3

c) 4 d) None of the above

Q.6 ROM stands for

a) Really old memory

b) Red object memory

c) Read only memory

d) Redundancy only memory

SECTION-B

Note: Objective type questions. All questions are compulsory. (6x1=6)

Q.7 1's complement of 11100110 is_____

Q.8 Write the expression for Distributive Law.

Q.9 A Decoder performs the reverse operation of_____

Q.10 Write the truth table of SR Flip Flop.

Q.11 Write the name of two methods of Digital to Analog Converter.

Q.12 Ripple Counter are also known as_____

SECTION-C

Note: Short answer type questions. Attempt any Eight questions out of ten questions. (8x4=32)

Q.13 Differentiate between Analog system and Digital System.

Q.14 a) Convert the 111110101100 Binary numbers into Hexadecimal numbers and Octal numbers.

b) Find the 2's complement of 01101101.

Q.15 Explain NAND gate as Universal gate.

Q.16 Explain Half Adder with circuit diagram.

Q.17 Design a 32:1 MUX by using 16:1 MUX and 2:1 MUX

Q.18 Write any five differences between Latch and Flip Flop