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Roll No. .....

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 0110 1100 is of _____ bytes.

a) 1 b) 2

c) 3 d) 4

Q.2 According to boolean algebra, which of the following is valid

a) X+X=0 b) 1.X=X

c) 0.X=X d) X.X=1

Q.3 The number of select lines for 1:16 DEMUX are ___

a) 2 b) 3

c) 4 d) 5

Q.4 A Decade counter has _____ states

a) 8 b) 9

c) 10 d) 11

Q.5 The NOR gate is OR Gate followed by

a) OR Gate b) AND Gate

c) NOT Gate d) NAND Gate

SECTION-B

Note: Objective type questions. All questions are compulsory (5x1=5)

Q.6 A _____ signal is discrete in nature.

Q.7 A full adder can add _____ number of bits.

Q.8 A counter is a _____ circuit consisting of a combination of flip flops used for counting pulses. (Combination/Sequential)

Q.9 Full form of SISO _____

Q.10 A.A=_____

SECTION-C

Note: Short answer type questions. Attempt any six questions out of eight questions. (6x5=30)

Q.11 Write the differences between synchronous and asynchronous counters.

Q.12 Explain De Morgan's theorem.

Q.13 Differentiate between RAM and ROM.

Q.14 Explain Half adder with circuit diagram.

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

Q.16 Describe JK Flip Flop.

Q.17 Explain about encoder with block diagram.

Q.18 Discuss principle and working of seven segment display.

SECTION-D

Note: Long answer type questions. Attempt any one questions out of two questions. (1x10=10)

Q.19 Explain in detail the working of SIPO shift register.

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