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2nd Sem / Instrumentation & Control Engg., Medical Electronics
Subject : Analogue and Digital Electronics

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 Acceptor type Semiconductors are formed by adding impurity of valances_____.

a) 3 b) 5

c) 4 d) 6

Q.2 The most commonly used Transistor circuit arrangement is_____.

a) CE b) CB

c) CC d) Both A and B

Q.3 FET has_____.

a) High Voltage gain

b) Large input impedance

c) Large Power gain

d) Large output impedance

SECTION-D

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

Q.23 Explain any one A/D converter with Suitable Diagram.

Q.24 Discuss construction, operation and characteristics of FET.

Q.25 Describe Counters and their applications with suitable Diagram.

Q.4 The base value of Hexadecimal No. System is_____.

a) 2 b) 4

c) 8 d) 16

Q.5 A nibble represents_____.

a) 3 bits b) 4 bits

c) 5 bits d) 2 bits

Q.6 _____ Flip Flop. is used as a latch

a) T b) J-K

c) Master slave J-K d) R S

SECTION-B

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

Q.7 Expand PISO.

Q.8 Draw Symbol of NAND Gate.

Q.9 Expand JFET.

Q.10 A Transistor has _____ terminals.

Q.11 Define Doping.

Q.12 Mention name of any one D/A converter.

SECTION-C

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

Q.13 Write a Short note on P and N type semiconductors.

Q.14 Discuss Structure of NPN Transistor.

Q.15 Explain NOR and NAND Gate, with their symbol and truth table.

Q.16 Write short note Note on Sequential Circuits.

Q.17 Compare CB, CE and CC configuration for transistor.

Q.18 Discuss I/P and O/P connections of CE configuration.

Q.19 Explain Diode as a Full wave rectifier.

Q.20 What is Zener Diode and Avalanche break down.

Q.21 Differentiate between MOSFET and BJT.

Q.22 Why NAND Gate is called as a universal Gate.