Q.24 Design a full adder circuit using NAND gates only.

Q.25 What is a D flip flop ? Discuss its applications.

Q.26 With the help of neat sketch, Explain successive approximation A/D converter.

Q.27 What do you understand by EPROM and PROM ? Explain

Q.28 Why address and data bus is multiplexed in 8085 ?

Q.29 Write a short note on Counters.

Q.30 Explain different interrupts in 8085 microprocessor.

Q.31 Convert $(177.25)_{10}$ to Octal number.

Q.32 Explain the working of R-S flip flop.

Q.33 Simplify the expression (A+B) (A+C)

Q.34 Draw Pin diagram of 8085 microprocessor.

Q.35 Explain with the help of necessary diagram how will you convert a digital signal to analog signal.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Draw architecture of 8085 microprocessor and explain each block.

Q.37 Find the minimum expression for the equation $y=\sum m(0,1,3,4,5,7,8,11,12,15)$ using K-map.

Q.38 Explain the working of successive approximation analog to digital converter.

No. of Printed Pages : 4 120955-030955-105855

Roll No. .....

Semester : 5 th

Branch : Electrical, GE. power station Engg.

Subject:- Digital Electronics & Microprocessors

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 The value of radix in binary number system is _____

a) 2 b) 8

c) 10 d) 1

Q.2 The universal gate is .....

a) NAND gate b) OR gate

c) AND gate d) None of the above

Q.3 A single transistor can be used to build ..... gates.

a) OR gate b) NOT gate

c) AND gate d) NAND gate

Q.4 Algebra of logic is termed as _____

a) Numerical logic b) Boolean algebra

c) Arithmetic logic d) Boolean number

Q.5 A 3 bits full adder contains _____

a) 3 Combinational inputs

b) 4 Combinational inputs

c) 6 Combinational inputs

d) 8 Combinational inputs

Q.6 The flip-flop is only activated by _____

a) Positive edge trigger

b) Negative edge trigger

c) Either positive or Negative edge trigger

d) Sinusoidal trigger

Q.7 How many clock pulses do a successive approximation converter requires for obtaining a digital output.

a) Twelve

b) Six

c) Eight

d) None of the mentioned

Q.8 Memory permits data to be stored and retrieved at comparable speed is called

a) R/W memory b) RAM memory

c) ROM memory d) EPRAM memory

Q.9 8085 microprocessor is an 8-bit microprocessor designed by ?

a) IBM b) Dell

c) Intel d) VAX

Q.10 Flag register is an 8-bit register having _____ 1 bit flip-flops

a) 3 b) 4

c) 5 d) 6

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Give any two examples of universal gate.

Q.12 How many bits are there in one byte _____

Q.13 Expand EPROM

Q.14 What do you mean by logic ?

Q.15 A Flip flop is a memory element (True / Flase)

Q.16 A half adder can add _____ bits

Q.17 The radix of Decimal Number System is _____

Q.18 8085 microprocessor has _____ address line

Q.19 LED stands for _____

Q.20 A full Adder has three inputs and two outputs (True / Flase)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Convert $(3AB)_{16}$ to decimal number.

Q.22 Write short note on Universal gates.

Q.23 State and prove De-morgan's Theorems.