

- Q.30 What is semiconductor memory? Write its various applications. (CO8)
 Q.31 What is interrupt ? Write name of interrupts used in 8085. (CO9)
 Q.32 What is Stack? Also explain subroutine. (CO9)
 Q.33 Explain direct memory access (DMA). (CO9)
 Q.34 Name any two 32-bit microprocessors. What are advantages of 32-bit microprocessor over 8-bit microprocessor. (CO9)
 Q.35 Write a short note on "8257". (CO9)

SECTION-D

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

- Q.36 Draw a K-Map to reduce the function. Realize the reduced function by using NAND gates. (CO2)
 $F = \Sigma m(0,4,8,9,12,13)$

- Q.37 Explain the working of binary weighted digital to analog converter. (CO7)

- Q.38 Draw and explain pin configuration of 8085 microprocessor. (CO9)

(Note: Course outcome/CO is for office use only)

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**5th Sem / Elect / GE/ Power Station Engg
Subject:- Digital Eltx. & Microprocessors**

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Binary means (CO1)
 a) One b) Two
 c) Four d) Eight
- Q.2 In Boolean algebra, $X + X = \underline{\hspace{2cm}}$ (CO3)
 a) 0 b) 1
 c) X d) $2X$
- Q.3 Inverter gate is also known as (CO2)
 a) NOT b) NOR
 c) NAND d) OR
- Q.4 Which displays device consume less power (CO4)
 a) LED
 b) LCD
 c) Fluorescent tube
 d) None
- Q.5 Outputs of flip flop are always (CO5)
 a) same
 b) same as inputs

- c) independent of each other
d) complementary
- Q.6 RAM stands for (CO8)
- a) Read access memory
b) Read accept memory
c) Random access memory
d) Random accept memory
- Q.7 In 8085 microprocessor, address bus is of _____ bits (CO9)
- a) 1 b) 4
c) 8 d) 16
- Q.8 Supply voltage of 8085 microprocessor. (CO9)
- a) 5V b) 12 V
c) 220V d) 240 V
- Q.9 Which of the following is non-maskable interrupt? (CO9)
- a) RST 5.5 b) RST 7.5
c) INTR d) TRAP
- Q.10 Instruction IN 08H is _____ byte instruction (CO7)
- a) 0 b) 1
c) 2 d) 3

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Convert $(205)_8 = (\text{_____})_{10}$ (CO1)
- Q.12 Draw symbol and truth table of NOR gate. (CO2)

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- Q.13 $X + XY = \text{_____}$. (CO3)
- Q.14 Define associative law. (CO3)
- Q.15 Define encoder. (CO4)
- Q.16 Write truth table of D flip-flop. (CO5)
- Q.17 Define static RAM. (CO8)
- Q.18 What is the use of flag? (CO9)
- Q.19 Name any two 32-bit microprocessors. (CO9)
- Q.20 Define addressing mode. (CO9)

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Derive NOT, OR and AND gate by using only NAND gates. (CO2)
- Q.22 Subtract the number $(10011)_2$, from $(11001)_2$, by using 2's complement method. (CO1)
- Q.23 Explain in detail, De-Morgan's theorem. (CO3)
- Q.24 What is half adder? Draw its truth table and logic expression. (CO4)
- Q.25 What is the difference between multiplexer and demultiplexer? (CO4)
- Q.26 Write a short note on "LCD". (CO4)
- Q.27 Explain the working of J-K flip flop. (CO5)
- Q.28 Write a short note on "Counter". (CO6)
- Q.29 What is analog to digital converter? Name different types of analog to digital converter. (CO7)

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