No. of Printed Pages : 4
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121044/31044

4th Sem. / ECE

Subject : Digital Electronics-II

Time : 3 Hrs. M.M. : 100

SECTION-A

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

Q.1 Which is the fastest logic family?

Q.2 Fan in signifies ____ of gate.

Q.3 The numbers of comparator required for 5 bit parallel A/D converter are 35. (True/False)

Q.4 Give full form of ECL.

Q.5 ROM memory is volatile in nature. (True/False)

Q.6 Differentiate circuit is used in dual slope A/D converter for generating ramp type voltage. (True/False)

Q.7 How many cells are there in 3 variables K- map?

Q.8 The numbers of flip flop required for a decade counter are_____.

Q.9 In EEPROM the contents of the memory can be erased by_____.

Q.10 IC 74181 is used for_____.

SECTION-B

Note: Very Short answer type questions. Attempt any ten parts (10x2=20)

Q.11 Define propagation deley.

Q.12 Give any two application of A/D converter.

Q.13 Define fuzzy set.

Q.14 What is the function of ALU.

Q.15 Draw block diagram of Mealy model machine.

Q.16 Define membership function.

Q.17 List the four characteristics of D/A converter.

Q.18 What is the function of Preset in flip flop.

Q.19 Define combinational circuit.

Q.20 Give two advantages successive approximation A/D converter.

Q.21 How many variable are eliminated using octet in K-map?.

Q.22 Write two advantages of Resistance welding.

SECTION-C

Note: Short answer type questions. Attempt any eight questions. (8x5=40)

Q.23 Explain how digital IC's are classified on the bases of packaging density?

Q.24 Define fan-in and fan-out for a logic family.

Q.25 Draw block diagram of PAL.

Q.26 Explain fuzzy control system.

Q.27 Differentiate between sequential circuit and combinational circuit.

Q.28 Design Mod 4 counter using JK flip flop.

Q.29 Define PROM and EEPROM.

Q.30 List five different types of fuzzy set operation.

Q.31 List five advantages of DRAM over SRAM.

Q.32 Explain any five characteristics of A/D converter.

SECTION-D

Note: Long answer type questions. Attempt any three questions. (3x10=30)

Q.33 Minimize the following Boolean expression using QM method

$f(A,B,C,D) = \sum m(0,1,2,5,6,7,8,9,10,14)$

Q.34 Explain the working of 4 bit R/2R ladder D/A converter with the help of suitable diagram.

Q.35 Design decade counter by using JK flip flop.

Q.36 Define logic family and compare ECL,TTL and CMOS on the basis of their characteristics.