

Attempt any FIVE Questions, All questions carry equal marks

- 1- a) What are don't care conditions in any code? Design a BCD to Gray code using don't care conditions. 12  
 b) What is Universal Logic? Discuss NAND and NOR gates as universal gates. 8
  
- 2- a) Draw Circuit Diagram of Schmitt Trigger and explain its response to an Arbitrary Signal. 12  
 b) What are GAL and PAL? Give their Significance. 8
  
- 3- a) What are Flip Flops? Why they are called so? Explain working of clocked RS Flip/ Flop and also mention its Advantages and Disadvantages. 14  
 b) What is Master Slave Flip Flop? Is it Edge triggered or pulse triggered Flip Flop? 6
  
- 4- a) Design a Full Adder Circuit and Implement it using a Decoder Circuit. 12  
 b) Discuss Flip Flops as Frequency Divider. How many Flip Flops are required to convert 160 Hz signal to 5 Hz Signal. 8
  
- 5- a) What is Modulus of a Counter? Design a MOD-5 Synchronous up/down counter. 12  
 b) What is Canonical form of an expression? Give its Significance in Digital Logic Design. 8
  
- 6- a) What are Types of ADC,s? Describe Construction and Working of Successive Approximation ADC. 14  
 b) Explain the Different Conversion Errors in DAC,s. 6
  
- 7- a) Explain Frequency Response of an Op Amp. Briefly explain compensation in Bandwidth. 13  
 b) What are Active Filters? How Op Amp is used as Band-Pass Filter? Elaborate your answer with diagram. 7
  
- 8- a) What is "Super Heterodyne" Receiver? Detail its construction and working also draw its block diagram. 12  
 b) Differentiate between SRAM & DRAM. Which one is preferred as compared to other? 8
  
- 9- a) What is Travelling Wave Tube Amplifier? Give its working in detail and also explain the role of "Bunching" in it. 13  
 b) List Operating Frequency Rang and Advantages /Disadvantages of Travelling Wave Tube Amplifier. 7