CODE: **196221**   TIME: 3Hrs
NOVEMBER 2020   MAX. MARKS : 50

PART A   *(10 x 2=20)*
*Answer any **TEN** questions*

1. List out the various techniques involved in the preparation of thin films

2. Mention the applications of TRIAC

3. What is ripple counter?

4. Compare the parameters of TTL and CMOS circuits

5. Draw the circuit of a voltage controlled oscillator

6. Give the pin configuration of 555 timer

7. Distinguish between memory mapped I/O scheme and peripheral mapped I/O scheme

8. What is the function of IO/M SIGNAL IN 8085.

9. Name the major components of keyboard interface 8255

10. State the principle of a stepper motor

11. What is mean by DIAC

12. Draw the pin out diagram of 8255

PART B   *(2 x5=10)*
*Answer any **TWO** questions*

13. Explain how FET acts like a voltage variable resistor

14. Explain Johnsons counter using logic diagram and truth table

15. Describe OP-AMP monostable multivibrator and explain its working

16. Explain the addressing modes of 8085

17. How do you interface a seven segment display?

18. Explain the construction and operation of sample and hold circuit using OP AMP

19. Write the assembly language program to arrange an array of numbers in ascending order

20. Explain the method of fabrication of monolithic resister

PART C   *(2x10=20)*
*Answer any **TWO** questions*

21. Describe the construction and working of FET

22. What are the different kinds of logic families available? Explain how a DTL NAND gate works with a suitable diagrams.

23. Describe and discuss the analog integration and differentiation circuits.

24. How instruction sets of 8085 are classified? Explain with examples

25. Using block diagram, explain how 8255 peripheral interface can be used in mode 1