QP CODE: 24000697

24000697

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2024

Sixth Semester

B.Sc Electronics and Computer Maintenance Model III

CHOICE BASED CORE COURSE - EM6CBT01 - IC TECHNOLOGY

2017 Admission Onwards

1880CB56

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What are the requirements of thin film conductors?
2. List any two advantages of thin film hybrids?
3. What is oxidation?
4. What is diffusion?
5. State ficks first law.
6. List any two properties of ionimplantation.
7. List the different type of lithographic process.
8. Name the photoresist used in lithography.
9. Comparison between epitaxy and CVD.
10. What is meant by encapsulation in bipolar ic fabrication.
11. Draw the cross sectional view of silicon gate NMOS structure.
12. List out the advantages of CMOS circuits over NMOS circuits.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What are the advantages of thick film hybrids and write its applications?

14. Explain construction of thin film capacitor and its features.

15. Explin the production of EGS.

16. Briefly explain basic steps of silicon wafer preparation.

17. Explain in detail about gaussian diffusion.

18. Write a short note on thermal oxidation process.

19. Explain horizontal epitaxial process in detail.

20. Briefly explain LPCVD.

21. How a schottky transistor is fabricated?

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Give a brief description of thick film technology.

23. With a neat sketch.Explain crystal growth process.

24. Explain the metallization process in IC manufacturing.

25. Explain in detail about various types of monolithic resistors.

(2×15=30)