

12. (a) Discuss in detail about the DC and AC characteristics of op amp. (13)
Or
(b) Explain the differential amplifier using op amp. (13)
13. (a) Write a note on logarithmic and antilog amplifier using op amp. (13)
Or
(b) Explain the working of SAR type and Flash type A/D converter. (13)
14. (a) With the help of schematic diagram, explain the operation of IC 566 VCO and derive its output frequency. (13)
Or
(b) What is PLL? How frequency multiplication is done in PLL? (13)
15. (a) What do you mean by the fixed voltage and variable voltage regulator. List its various applications. (13)
Or
(b) Write short notes on:
(i) LM380 Power Audio Amplifier. (6)
(ii) ICL 8038 Function Generator. (7)

PART C — (1 × 15 = 15 marks)

16. (a) What are the new trends in Integrated circuit technologies and explain about its scope for future generation?
Or
(b) Write a note on recent fabrication methods of FET for industrial applications.

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