

**LINEAR INTEGRATED CIRCUITS AND APPLICATIONS****UNIT-II****CHARACTERISTICS OF OPAMP**

1. What are the advantages of ICs over discrete circuits.?
2. What is OPAMP?
3. Draw the pin configuration of IC741.
4. List out the ideal characteristics of OPAMP?
5. What are the different kinds of packages of IC741?
6. What are the assumptions made from ideal opamp characteristics?
7. Mention some of the linear applications of op – amps:
8. Mention some of the non – linear applications of op-amps:-
9. What are the areas of application of non-linear op- amp circuits?
10. What happens when the common terminal of  $V_+$  and  $V_-$  sources is not grounded?
11. Define input offset voltage.
12. Define input offset current. State the reasons for the offset currents at the input of the op-amp.
13. Define CMRR of an op-amp.
14. In practical op-amps, what is the effect of high frequency on its performance?
15. What is the need for frequency compensation in practical op-amps?
16. Define slew rate.
17. Why IC 741 is not used for high frequency applications?

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18. What causes slew rate?
19. Define thermal drift.
20. Define supply voltage rejection ratio (SVRR)

### PART-B

1. Explain in detail of a basic differential amplifier.  
(16)
2. Draw the circuit diagram of op-amp differentiator, integrator and derive an expression for the output in terms of the input. (16)
3. Explain in detail about voltage series feedback amplifier.  
(16)
4. Derive the gain of inverting and non-inverting. (16)
5. Explain and derive the condition for DC-characteristics of an operational amplifier. (16)

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