PES UNIVERSITY

Dept. of Electronics and Communication Engineering

UE25EC141A - Electronic Principles and Devices (4-0-0-4-4)

Unit3: Assignment

1) With a neat diagram explain Common base input- output characteristics (6 Marks)
2) With a neat diagram explain Common emitter input-output characteristics. (6 Marks)
3) Obtain the relationship between α and β (4 Marks)
4) Explain briefly operating point. (6 Marks) and Write a note on effects of temperature on Q-point (4 Marks)
5) With mathematical interpretations explain Fixed bias configuration (6 Marks)
6) With mathematical interpretations explain Emitter bias configuration (6 Marks)
7) Explain with mathematical interpretations Voltage divider bias configuration (7 Marks)
8) Explain Single Stage CE Amplifier. (6 Marks)
9) With a neat diagram explain the Common Mode operation in Operational Amplifier [Op-Amp] (4 Marks)
10) Define the following with respect to Op-Amps (8 Marks)
    (i) Input offset Voltage
    (ii) Output offset Voltage
    (iii) Input resistance
    (iv) Output resistance
11) Define the following with respect to op-amp (4 Marks)
    (i) Slew rate
    (ii) Common mode rejection ratio
12) Explain the Virtual Ground concept. (4 Marks) With relevant mathematical interpretation explain an Op-Amp inverting amplifier.(4 Marks) With relevant mathematical interpretation explain an Op-Amp Non-inverting amplifier. (4 Marks)
13) With relevant mathematical interpretation explain an Op-Amp summing amplifier. (4 Marks)
14) With relevant mathematical interpretation explain an Op-Amp sub tractor. (4 Marks)
15) Explain unity follower or voltage follower using Op-Amp (4 Marks)