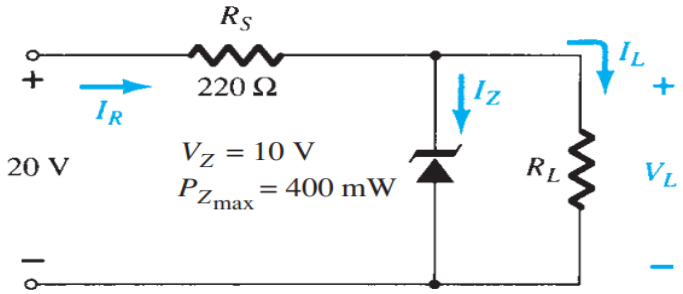
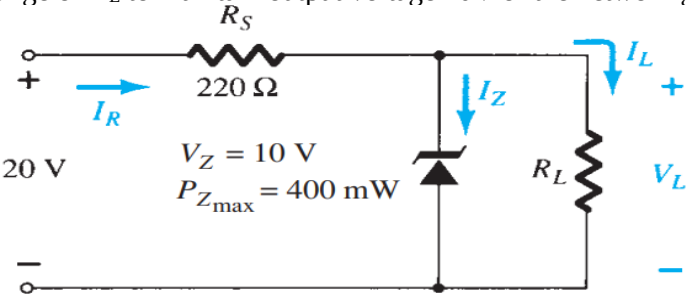
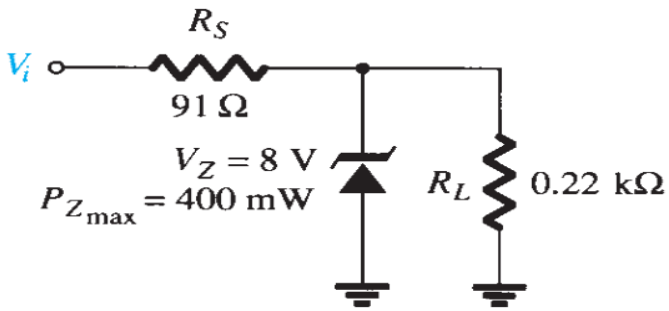
ABES Engineering College, Ghaziabad

Session: 2023-24 Semester: I Course Code: BEC-101
Course Name: Fundamental of Electronics Engineering

Assignment 3

S.No.	KL, CO	Question	Marks
1	K2,CO5	Describe briefly Satellite Communication with an appropriate block diagram.	5
2	K2, CO5	Describe briefly radar Communication with an appropriate block diagram.	5
3	K2, CO5	Describe the evolution of wireless communication in detail. OR Discuss the comparisons among 1G,2G,3G,4G & 5G communication Technologies.	5
4	K2, CO1	(i) Draw and explain the GSM architecture. (ii) Write five differences between GSM and CDMA.	5
5	K2, CO1	Explain the working of Zener diode as a voltage regulator against: i. variable load resistance and fixed load resistot ii. variable input voltage and fixed load resistance	5
6	K3, CO1	**Determine V_L , I_L , I_Z and I_R for the network given below for R_L =180 Ω.** 	5
7	K3, CO1	Determine the Range of R_L to maintain output voltage 10V of the network given below. 	5

8	K3, CO1	For the network given below, determine the range of V_I that will maintain V_L at 8 V and not exceed the maximum power rating of the Zener diode. 	5
9	K3, CO1	Design a voltage regulator that will maintain an output voltage of 20 V across a 1-kΩ load with an input that will vary between 30 V and 50 V. That is, determine the proper value of R_S and the maximum Zener current I_{ZM}	5
10	K3, CO2	Write short notes on the following (i) LED (ii) Tunnel Diode (iii) Photodiode (iv) Varactor Diode	5

CO-Course Outcomes mapped with respective question
KL- Bloom's Knowledge Level (K_1,K_2,K_3,K_4,K_5,K_6)
K_1 – RememberK_2 – UnderstandK_3 – ApplyK_4 – AnalyzeK_5 – EvaluateK_6– Create