



PADRE CONCEIÇÃO COLLEGE OF ENGINEERING

Verna - Goa

First Year of Engineering

Internal Test-II

Semester & Scheme: I (RC 2019- 20)

Course: FE130 Basic Electrical and Electronics Engineering

Course Instructor: Shivani Lotlikar

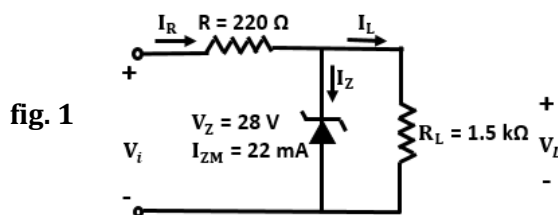
Date: 13/02/2021

Time: 10:00 am- 12:00 noon

Max Marks: 25

Instructions: All questions are compulsory. Assume missing data, if any and justify.

Q. No	Questions	Marks	CO	CL
Q1. a.	Draw a neat labelled block diagram of Nuclear Power Plant.	[2]	FE130.1	CL1
b.	Explain the function of following blocks i) Coal and ash handling unit ii) Photovoltaic cells iii) Penstock.	[3]	FE130.1	CL2
Q2.	Explain with a neat diagram the Output Characteristics of common base configuration of npn type bipolar junction transistor.	[5]	FE130.3	CL2
Q3.	Explain with neat diagram the construction and working of n-channel junction field effect transistor.	[5]	FE130.3	CL2
Q4.	Find the range of input voltages for which the Zener diode circuit shown in figure below maintains 28 V across a 1.5 kΩ load, assuming that series resistance R = 200 Ω and Zener current rating is 22 mA?	[5]	FE130.4	CL3



Q5.	For a fixed bias network shown below, determine the following:	[5]	FE130.4	CL3
(i) I_{BQ}	(ii) I_{CQ}	(iii) V_{CEQ}	(iv) V_{BC}	
(v) I_{CSat}	(vi) V_C	(vii) V_E	(viii) V_B	

