D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY
KASABA BAWADA KOLHAPUR-416006
(An Autonomous Institute)
S. Y. B. Tech-ETC (Semester-III)
END SEMESTER EXAMINATION, OCT/NOV- 2021-22
COURSE NAME: **Electronics Circuits Analysis and Design-I,** COURSE CODE: **201ETL202**

Q. Paper Code:
22SYET202302

Day and Date: Thursday, 20/01/2022
Time: 11.00 am to 12.30 Pm

Seat No :
Max. Marks- 50

Instructions:
  i.   *All Questions are compulsory.*
  ii.   *Figure to the right indicate full marks.*
  iii. *Use of non-programmable calculator is allowed.*
  iv.   *Use of standard data sheet is allowed,*

BT	CO's	Q. No.		Marks
		Q.1	**Attempt the following**	**20**

		a	Full wave rectifier uses diode with Rf = 1Ω. Transformer is center tapped with output 10-0-10 Vrms and resistance of 5Ω for each section. Calculate.
			      i) No load DC voltage
			      ii) DC output at IL = 100mA & % Regulation.
			      iii) Power conversion efficiency.
				7

		b	For a zener shunt regulator if Vz=10V, Rs=1K Ω, RL=2KΩ and input voltage varies from 20V to 40V, Find the maximum and minimum values of zener current.	**7**
		c	Write a note on "78 XX series and 79XX series".	**6**
		Q.2	**Attempt the following**	**15**
		a	Draw and explain RC high pass filter circuit, derive expression for output voltage of high pass filter. or With circuit and waveforms explain operation of combinational clipper.	**7**
		b	Draw and explain fixed bias circuit. Derive equation for IB and VCE.	**8**
		Q.3	**Attempt the following**	**15**
		a	Draw the drain characteristics of JFET, and explain all the regions. or Draw and explain the construction n-channel JFET.	**7**
		b	With circuit diagram explain the function of each component in single stage self-biased common emitter amplifier.	8

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