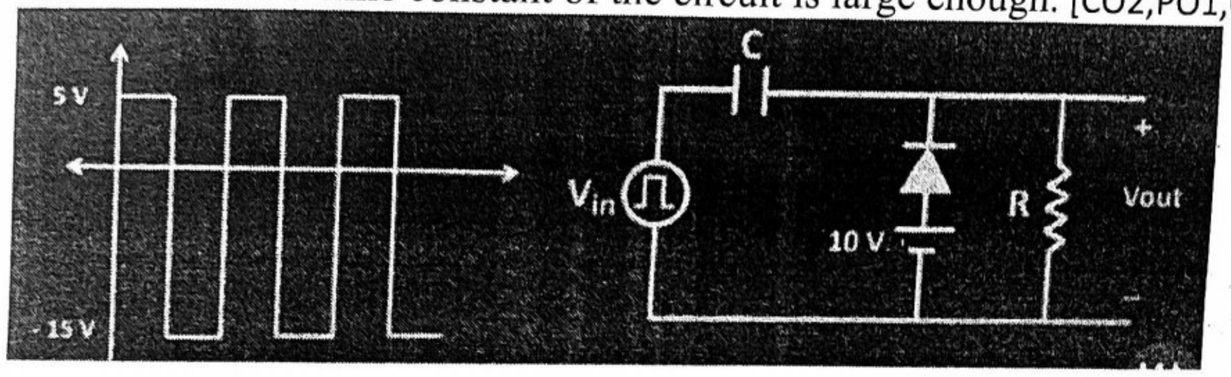
Bangladesh Army University of Engineering & Technology
Dept. of CSE, Course Code: CSE-2215, Course Title: Digital Electronics and Pulse Technique
Full Marks: 10, Time: 30 min., CT 1 (17/09/2024),

1.	**(a)**	Can you explain why ECL is also referred to as CML?	**2**
	(b)	Draw the basic circuit of ECL and also explain its working principles.	**5**
	(c)	Write two important characteristics of CML.	**3**

Batch-16th Class Test: 02 Department: CSE Course Code: CSE-2215

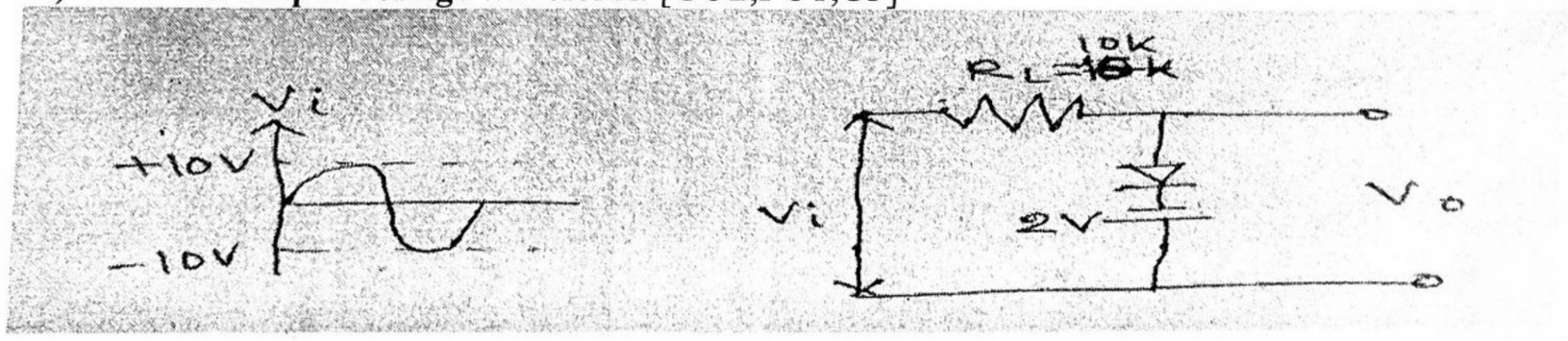
Course Title: Digital Electronics and Pulse Technique Full Marks- 15 Time: 30 Minutes.

Q. No.:		Marks
1	(a) Illustrate clipper and clamper.[CO1,PO1,C2]	5
	(b) For the network shown in below find the output of the waveform. Assume the diode is ideal and the RC time constant of the circuit is large enough. [CO2,PO1,C3]	4



(c) For the given picture below,
i) Identify the circuit.
ii) Calculate V_0
iii) Draw the output voltage waveform. [CO2,PO1,C3]

6



BAUET, CSE, CC: CSE-2215, C T: DEPT, Full Marks: 10, Time: 30 min., CT 2 (05/11/2024).

1. (a) What is FF? Describe the working principle of basic NAND gate FF. **4**

   (b) ~~Who~~ How would you construct the characteristic equation of clocked RS FF? **5**

   (c) What is the key limitation of JK FF? **1**

Batch-16th Class Test: 04 Department: CSE Course Code: CSE-2215

Course Title: Digital Electronics and Pulse Technique Full Marks- 15 Times: 30 Minutes.

Q. No.: 1		Marks
(a)	What function does a DAC perform? Explain the basic characteristics of ADCs. [CO1,PO1,C2]	4
(b)	Assume that the analog sample value is Va = 4.4v. Show the step by step conversion of the analog sample value 4.4v into digital form by using Successive Approximation ADC. [CO1,PO1,C3]	6
(c)	Show the digital outputs of a 4-bit flash ADC for all the possible sample values of the analog input. [CO1,PO1,C3]	5