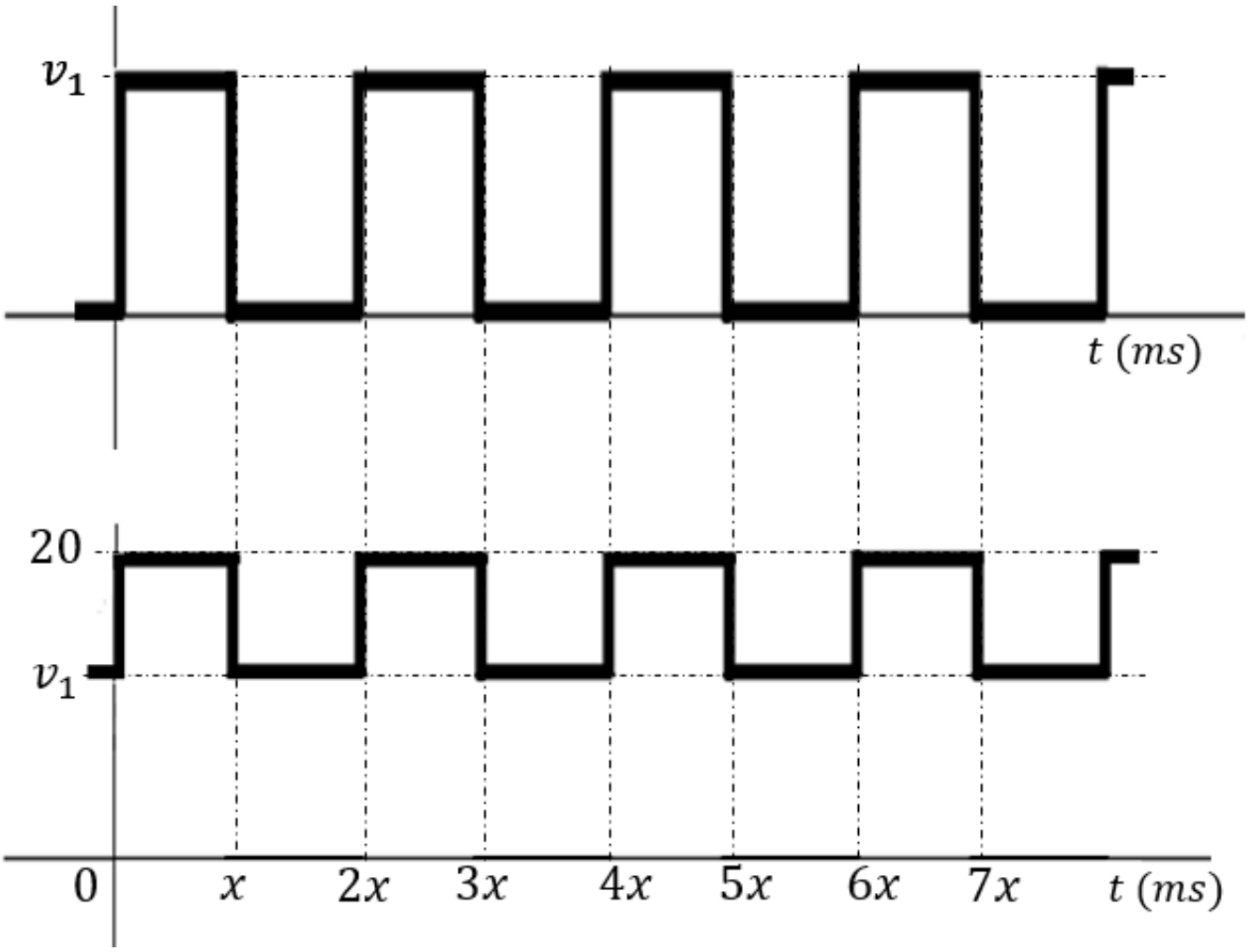
Lab Task 3

Construct and Simulate a Signal-Processing Circuit

1/1 point (graded)



Consider the voltage waveforms shown above. Here, the y-axis is in Volts and the x-axis is in $\mathrm{milliseconds}$. In the figure, the value of v_1 is the first 2 digits of your roll-number, and, the value of x is the last 2 digits of your roll number. For example, if your roll number is "$\mathbf{18101485}$, then, $v_1 = 18\ \mathrm{Volt}$ and $x = 85\ \mathrm{ms}$.

Construct a circuit in PROTEUS that can take the upper waveform as input and produce the lower waveform as output. To construct the desired circuit, you will need to use both clippers and clampers. In your circuit,
you MUST use the clipper circuit $\mathbf{after}$ the clamper circuit.

Use VPULSE to make the input signal. Perform $\mathrm{ANALOGUE\ ANALYSIS}$ to simulate the circuit. Plot the graph of both the input and output waveforms in the Graph Window of $\mathrm{ANALOGUE\ ANALYSIS}$. (At least 5 cycles of the input and output should be plotted).

You will be graded based on -
1. Making the input signal properly. Setting the proper value of voltage and time parameters.
2. Constructing the circuit properly to perform the given task and accroding to the given instruction.
3. Plotting the graphs of the input and output voltages properly.

3. Plotting the graphs of the input and output voltages properly.

Input the number "2" below -

2 ✔

2

Submit the simulation-file of your circuit with the ".pdsprj" extension (this will be in the folder where you saved your project).
The filename must be like this: Section_2_StudentID_Name.
For example, if you are a student of Section "7", whose StudentID is "18101485" and name is "Sowmitra Das"... your filename will be: 07_2_18101485_SowmitraDas.
The number 2 must be between the section number and student ID.

Submit You have used 1 of 5 attempts

Staff Graded Assignment

File uploaded 02_2_19101038_FarihaRahman.pdsprj

This assignment has not yet been graded.

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