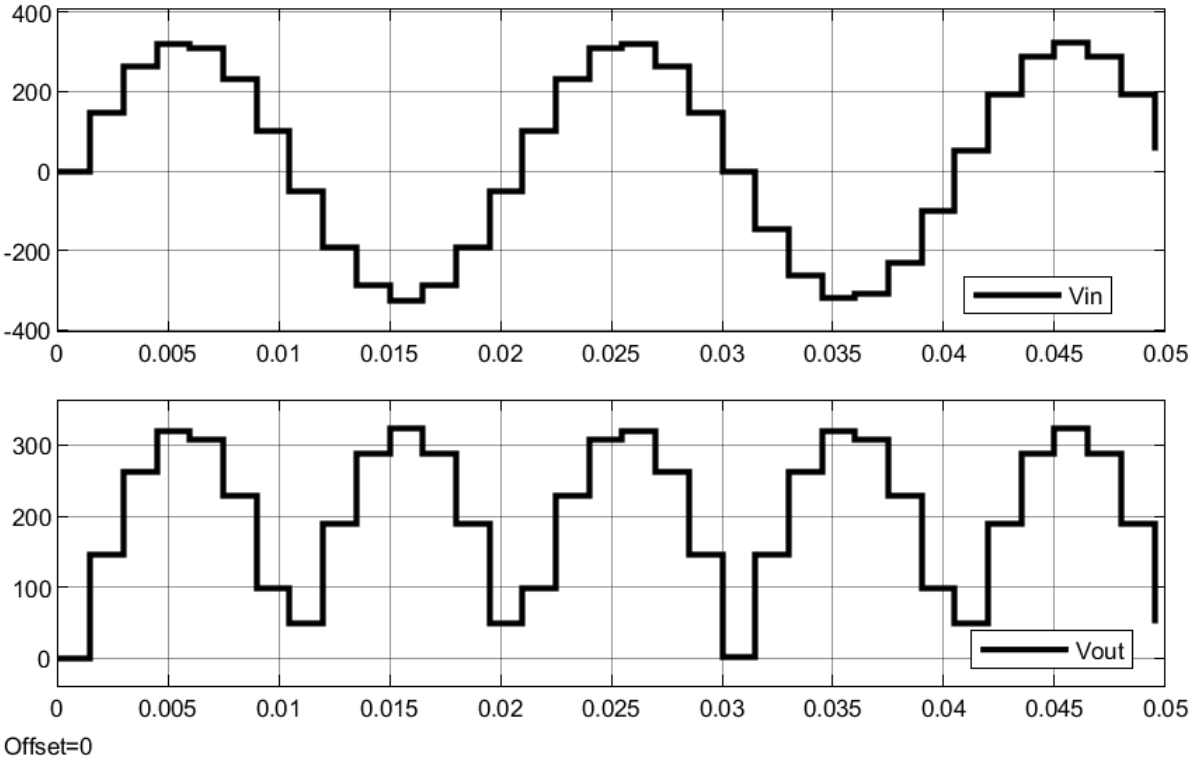

Figure 1: Simulation results of the single-phase diode rectifier given in question 1, where the step size is set to 1.5 msec

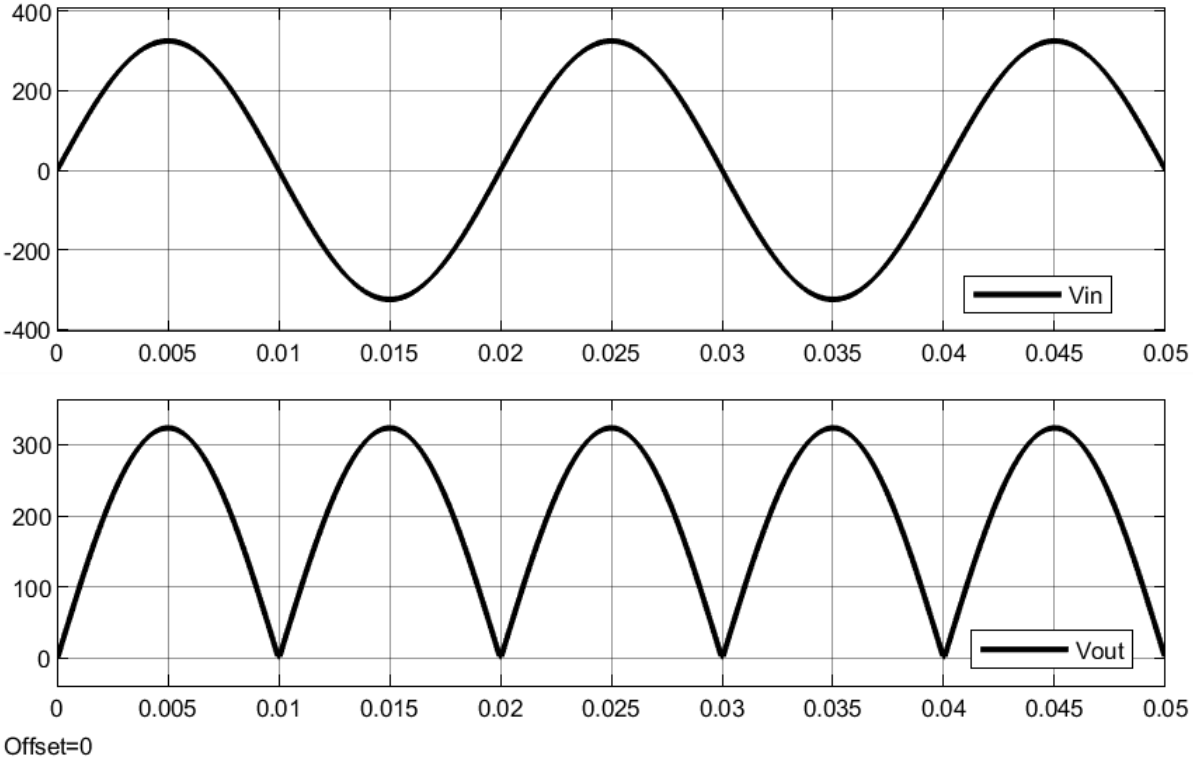

Figure 2: Simulation results of the single-phase diode rectifier given in question 1, where the step size is set to 10 μsec

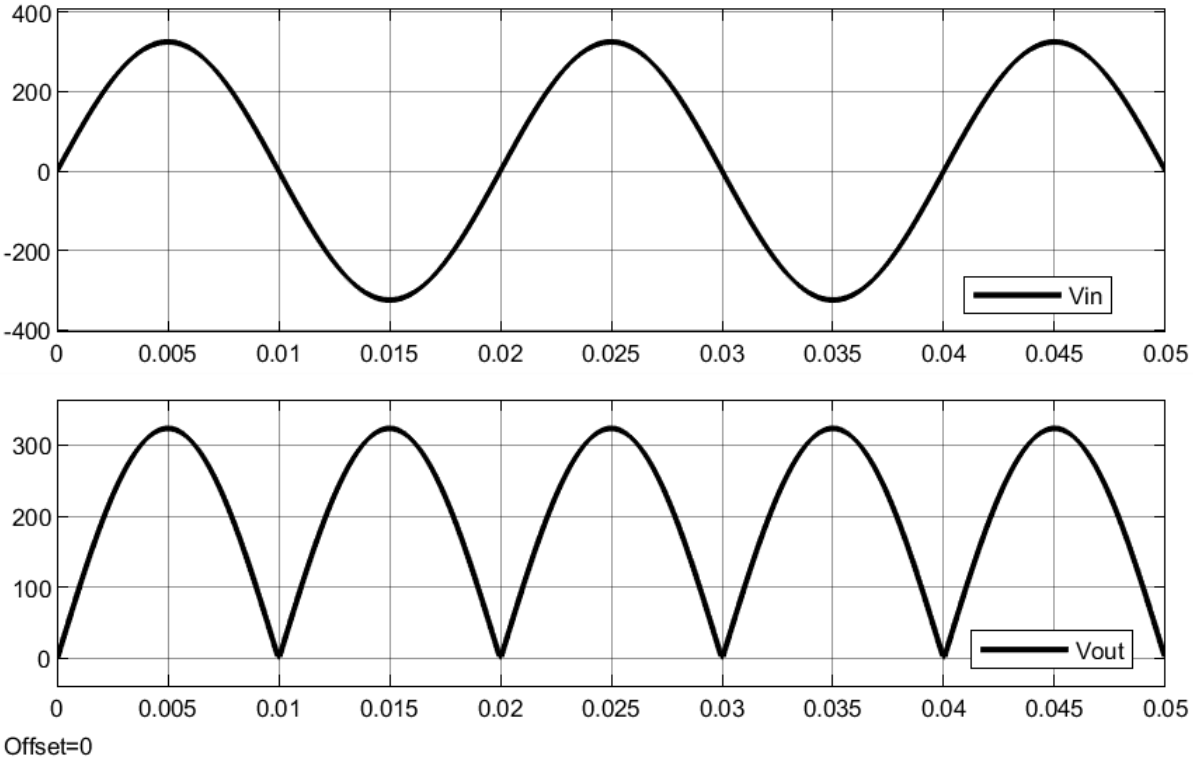

Figure 3: Simulation results of the single-phase diode rectifier given in question 1, where the step size is set to 1 µsec

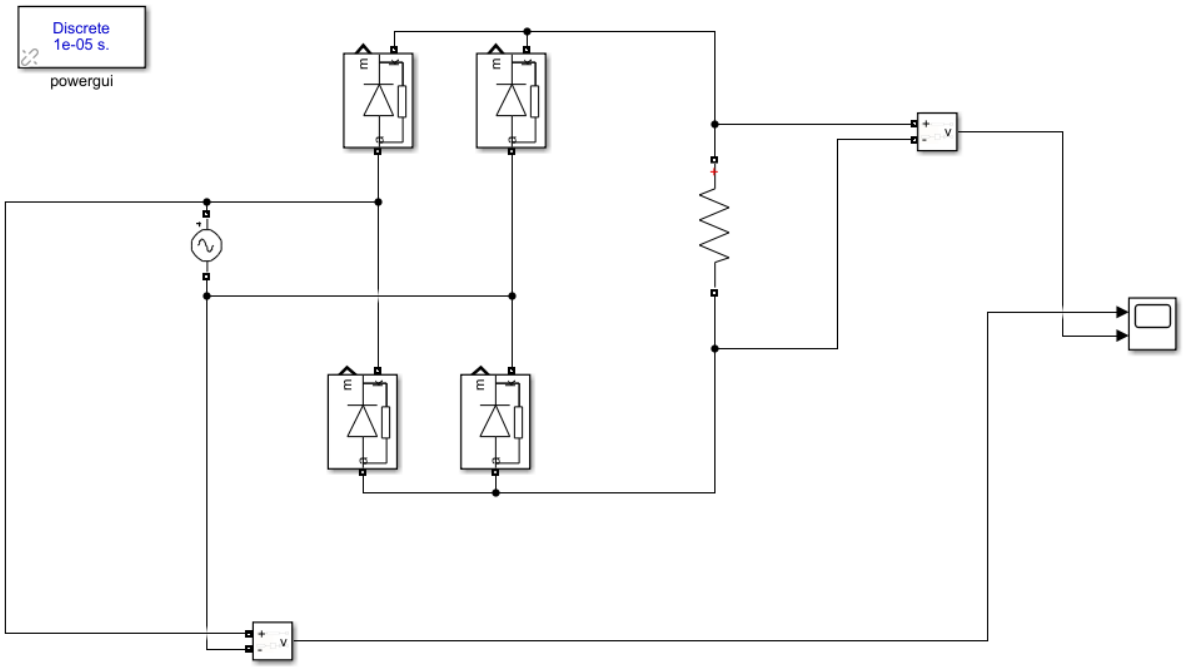

Figure 3: The circuit diagram which was used to obtain the simulation results given in Figures 1, 2 and 3

Step size is the period at which the solver will run. Therefore, it affects the final results of the simulation in terms of speed and accuracy. Evidently, the shorter the step size is the more accurate the simulation results will be. However, as this means calculating more values for the given simulation period, lowering the step size lengthens the time required for the simulation. Thus, it is a trade-off between speed and accuracy. For example, in this question 1.5 msec was too long. The distortion in the simulation can be seen as a stair waveform, indicated by Figure 1. However, 10 μsec and 1 μsec step sizes are acceptable since the outputs of the simulations are accurate enough which can be seen in Figures 2 and 3, respectively.