Question 1

Fill in the table below:

Table 1.1: Derived SI units and abbreviations

Quantity	Unit	Abbreviation
Length		
Mass		
Time		
Electrical current		
Temperature		
Velocity		
Acceleration		
Force		
Work, energy		
Power		
Electric charge		
Electric potential		
Resistance		
Capacitance		
Magnetic field strength		
Magnetic flux		

Question 2

Show all working outs for each convection before filling in the final answer on the table.

Table 2.1 Conversion to SI units in scientific notation

	Quantity	Measurement	Measurement in SI units
2.1	Distance to the nearest clinic	$3.65\ km$	
2.2	Volume of water tank	$5000\ l$	
2.3	Ground area of a bedroom	$4.5 \times 10^4\ cm^2$	
2.4	Mass of a car	$2.06\ tons$	
2.5	Resistance of a stove	$0.500\ k\Omega$	
2.6	Distance between Cape Town and Johannesburg	$1{,}3975\ Mm$	

Question 3

Fill in the table below with the most significant, the least significant and the number of significant figures for each number;

Table 3.1 Significant figures

	Number	Most significant figure	Least significant figure	Number of significant figures
3.1	5000			
3.2	101010.0			
3.3	0.00230			
3.4	18.005			
3.5	999.99			
3.6	400001			

Question 4

Conduct and experimental set-up where you will collect water from a running source, e.g. tap, rain water, water spring, shower, etc. Use your phone timer to see how much water you can collect into the container over 3 min. Make sure the water does not overflow from your container. Repeat the measurements 30 times. Draw a table to record the volume of water you collect each time.

Takes	**Volume (liters)**
1	
2	
3	
.	
.	
30	

4.1. Give an appropriate title to the table you have drawn with your results.
4.2. List the tools/ apparatus used for your experiment.
4.3. Calculate the mean value of the quantities.
4.4. Calculate the standard deviation form the mean value of the experiment you conducted.