PHYSICS
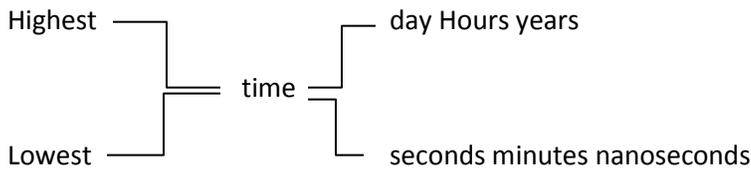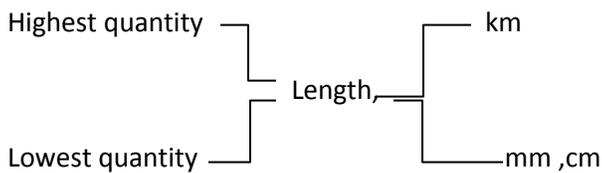
1.
   a. Unit : it is a standard unit of measurement
   b. Quantity : it means size, amount , vastness magnitude or simply stated as answer for how much or how many?
   c. Physical quantity: A quantity which can be e measured is called physical quantity.

2. Fundamental physical quantities are set of physical quantities.
   If no quantity derived from the remaining physical quantities, then the set is called fundamental physical quantities.
   Eg: { mass ,length, time}

3.

Highest quantity ⟶ mass kg

Lowest quantity ⟶ mass mg, g

Highest quantity ⟍
                    Length ⟍ km
Lowest quantity ⟋   mm ,cm

Highest ⟍   day Hours years
          time
Lowest ⟋   seconds minutes nanoseconds

4.

Unit for length ⟶ distance ⟶ metre

Weight ⟶ mass ⟶ kilogram

Time ⟶ seconds

5.
a.
    1000m=10km
    1km=1000m
    1000m=1km

b. 20cm into km
   20 cm x Km

20 cm = 20 X 10^{-2} m = 0.2 m   {centi = 10^2 m, Kilo 10^3 m ,

Mulitilping 10^3 and 10^{-3}

0.2 x 10 X10^3 X 10^{-3}

0.2 X 10^{-3} km

c. 25 km to m   [1 km = 1000 m

25 km = 25000 m

d. 62 km to cm   [1m = 100 cm , 1 km = 1000 m]

62 km = 62000 m

62000m = 620 cm

e. Light year = 9.5 x10^{15},9.5x10^{12} km

f. 1A (Angstrom) = 10^{-10}m, 10^{-8} cm

g. 3000 g to 1 kg   [kilo = 10^3

300 X 10^{-3} X 10^3 g

300 X 10^{-3} kg

$\frac{300}{1000}$kg = 0.3 kg

h. 5mg to kg   [m = 10^{-3} , k = 10^3

5 X 10^{-3} X 10^{-3} X 10^3 g

5 x10^{-6} kg

i. 400 kg X mg   [m = 10^{-3} g

400 X 10^3 X 10^3X 10^{-3} g

400 X 10^3 X 10^3

400 X 10^{-6} mg

j. 32 sec to ms

32 sec = 32 x 10^3 X 10^{-3} s = 52 X 10 ms

k. $1 s = \frac{1}{60}$ min $= \frac{1}{60} \times \frac{1}{60}$ $hr = \frac{1}{60 \times 60 \times 24}$ day

$\frac{1}{86400}$ $day.$ [Note : Day = 24 hr; 1hr = 60 min; 1 min = 60 sec

l. 15 kmphs to m/s

15 X $\frac{5}{18}$ m/s

15 X $\frac{5}{18} = \frac{25}{6}$ m/s $\frac{km}{hr} = 1 m$

$\frac{25}{6}$ = 4.16 m/s   (hr to sec)

m. 20 m/s to kmph

$20 \text{ X } \frac{18}{5} = 72 \text{ } Kmph$

n. 54 kmph to m/s

$54 \text{ X } \frac{18}{5} = 3 \text{ X } 5 = 15 \text{ m/s}$

o. 1 m/s into kmph

$1 \text{ X} \frac{18}{5} = \frac{18}{5}$ kmph = 3.6 kmph

BIOLOGY

I. Fill in the Blanks
1. Forest
2. Pistil
3. Leg
4. Oviparous
5. Cell

II. Answer the following questions
1. Minerals such as calcium, phosphorus, potassium, sodium and magnesium are minerals in human body .All the remaining elements in human body are called trace elements.
2. Camel can store upto 20 gallons litres of water in its hump.
3. veins are bluish in colour as it carries deoxygenated blood
4. Parallel venation
5. Vitamin A

III. Answer the following questions

1. Humus is the organic component of soil, formed by the decomposition of leaves and other plant material by soil microorganisms.
2. Adventious roots are plant roots that form from any non-root tissue and are produced roots.
3. Chloroplast

4.

Plants	Parts
Spinach	leaf
Wheat	seeds
Potato	stem
Apple	fruit
Carrot	root

5. Cotton   - cotton plant

   Jute   - corchorus

6. Importance of transpiration
- It creates a negative pressure that helps to draw water and minerals up through the plants from its roots.
- Helps to keep the plant cool on hot weather

IV.   **Answer the following questions**

1.
- Communicable diseases can be avoided by
- Hand washing with soap and water is the simplest way
- Consuming fruits and avoid crowded areas with coughing

2. As there are chances to increase the infection in our body because our nails are dirty if we bite our nails it enters and causes health problems and infection

3. Regular exercise and proper rest help to maintain a healthy and fit body it also promotes muscle and bone strength and decrease the risk of certain diseases.

4. By eating more fast food which is higher in fat calories cholesterol leads to increased risk of health problems such as high blood pressure heart disease and obesity

5. Hemoglobin helps in the transportation of carbon dioxide and hydrogen ions carries Oxygen from the lungs to tissues of the body

V.
1. Diagram flower and label its parts

Common Flower Parts
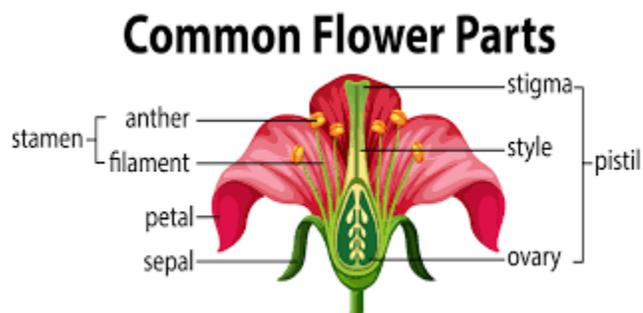
2. Diagram life cycle of silkworm