

Question 7

a) Distinguish I.Q & E.Q

I.Q is the Intelligence Quotient which entails skills like problem solving, analytical skills, and logical reasoning. If a person has a higher I.Q, he might be good at maths, science, or wherever logical reasoning is required. Whereas, E.Q is the Emotional Quotient which entails skills of recognizing, understand, and managing emotions. If a person has a higher E.Q level, he might be an empathetic, and emotionally available individual.

b)

Aman's present age = x

Aman's age 10 years back = $x - 10$

" " 20 " after = $x + 20$

$$x + 20 = 10(x - 10)$$

$$x + 20 = 10x - 100$$

$$20 + 100 = 10x - x$$

$$120 = 9x$$

$$40 \overline{) 120} = x$$

$\frac{120}{9} = x$

13.33 years

~~13 years and~~

$$\begin{array}{r} 13.33 \\ 3 \overline{) 40} \\ - 3 \\ \hline 10 \\ - 9 \\ \hline 10 \\ - 9 \\ \hline 1 \end{array}$$

c)

$$40 + 60$$

$\frac{40 + 60}{2}$

$$= \frac{100}{2} = 50 \text{ minutes}$$

$$\frac{16}{24} = \frac{2}{3}$$

d)

$$\frac{3}{5} - \frac{5}{3}$$

$$\frac{3}{5} - \frac{5}{3}$$

$$\frac{3}{5} - \frac{5}{3}$$

$$\frac{3}{5} - \frac{5}{3}$$

$$\frac{9 - 25}{15}$$

$$\frac{9 - 25}{15}$$

$$- \frac{16}{15}$$

$$\frac{-16}{15} \div \frac{5}{3} \times 100$$

$$\frac{-16}{15} \times \frac{3}{5} \times 100$$

$$\frac{-16}{15} \times \frac{3}{5} \times 100$$

$$\frac{-16}{15} \times \frac{3}{5} \times 100$$

$$- \frac{16}{15} \times \frac{3}{5} \times 100 = -64\%$$

64% error

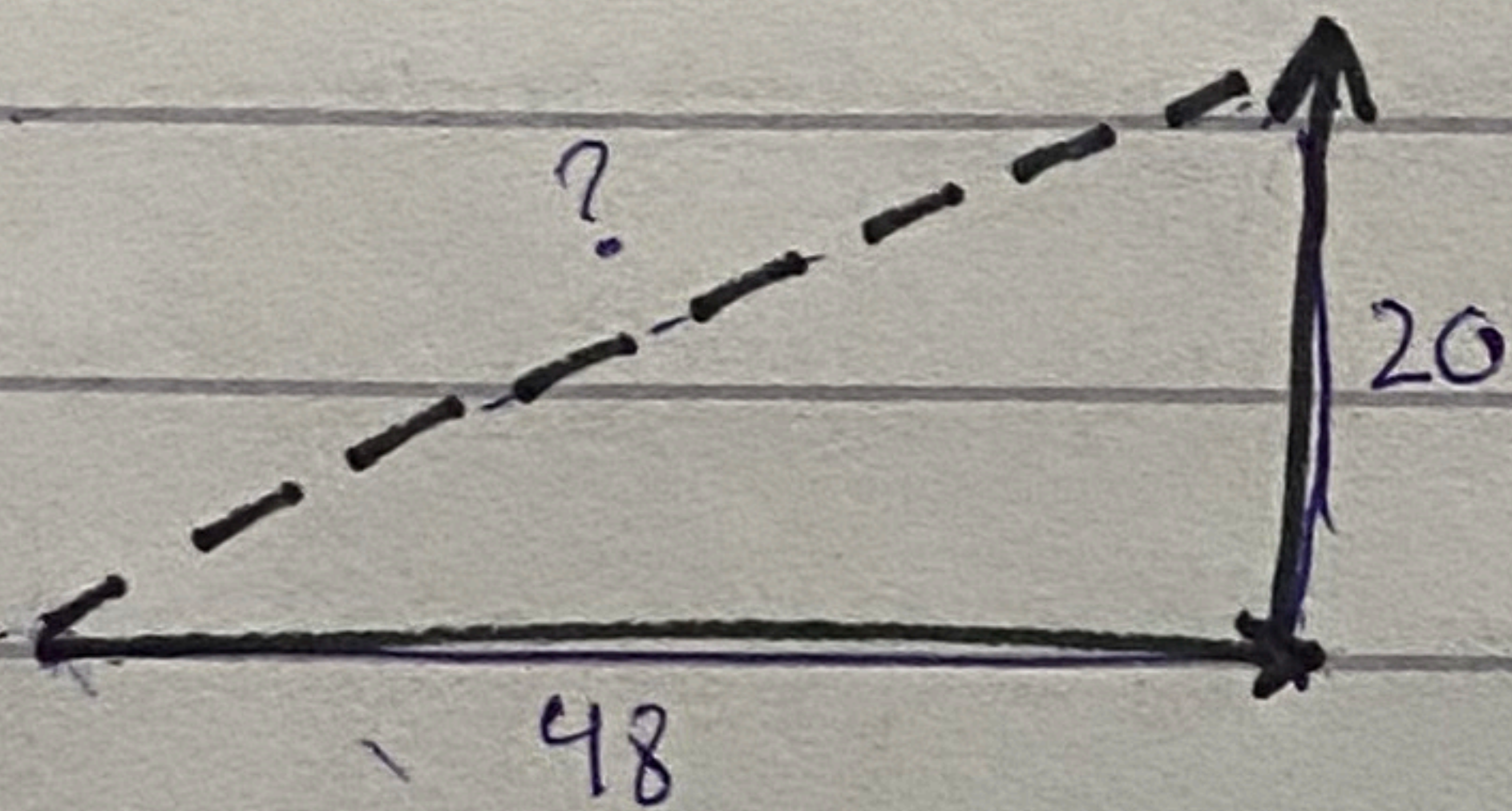
Question 8

a) width $\rightarrow x$

$$x = 60\% \text{ of } 15$$

$$\frac{3 \cancel{60} \times 1 \cancel{5}}{1 \cancel{2} \cancel{00}} \rightarrow \boxed{9 \text{ ft. width}}$$

b)



$$H^2 = B^2 + P^2$$

$$H^2 = 48^2 + 20^2$$

$$\sqrt{H^2} = \sqrt{68^2}$$

$$H = 68$$

c)

$$\frac{x}{40} = 52.15$$

$$\begin{array}{r} 52.15 \\ \times 40 \\ \hline 208600 \\ \underline{208600} \\ 2086000 \end{array}$$

185

-49

36

$$\begin{array}{r} 36 \\ \underline{2122} \\ 2061 \end{array}$$

$$2 \overline{) 2122}$$

$$2086 - 49 + 85$$

$$2086 + 36$$

$$\frac{2061 \overline{) 2122} = \boxed{53.05} \rightarrow \text{new average}$$

$$20 \ 40$$

d)

37 \rightarrow veg Pizza

25 \rightarrow chicken

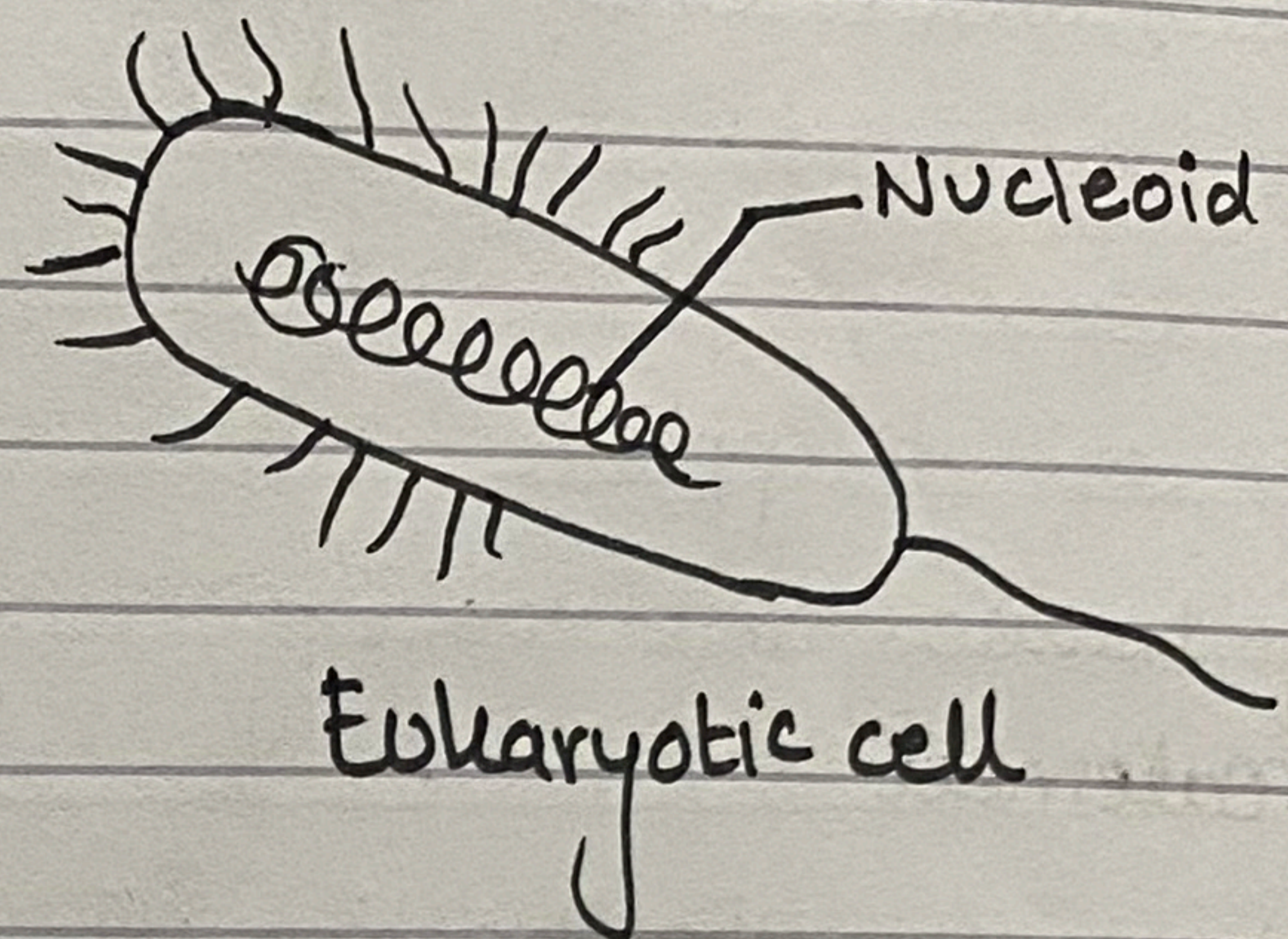
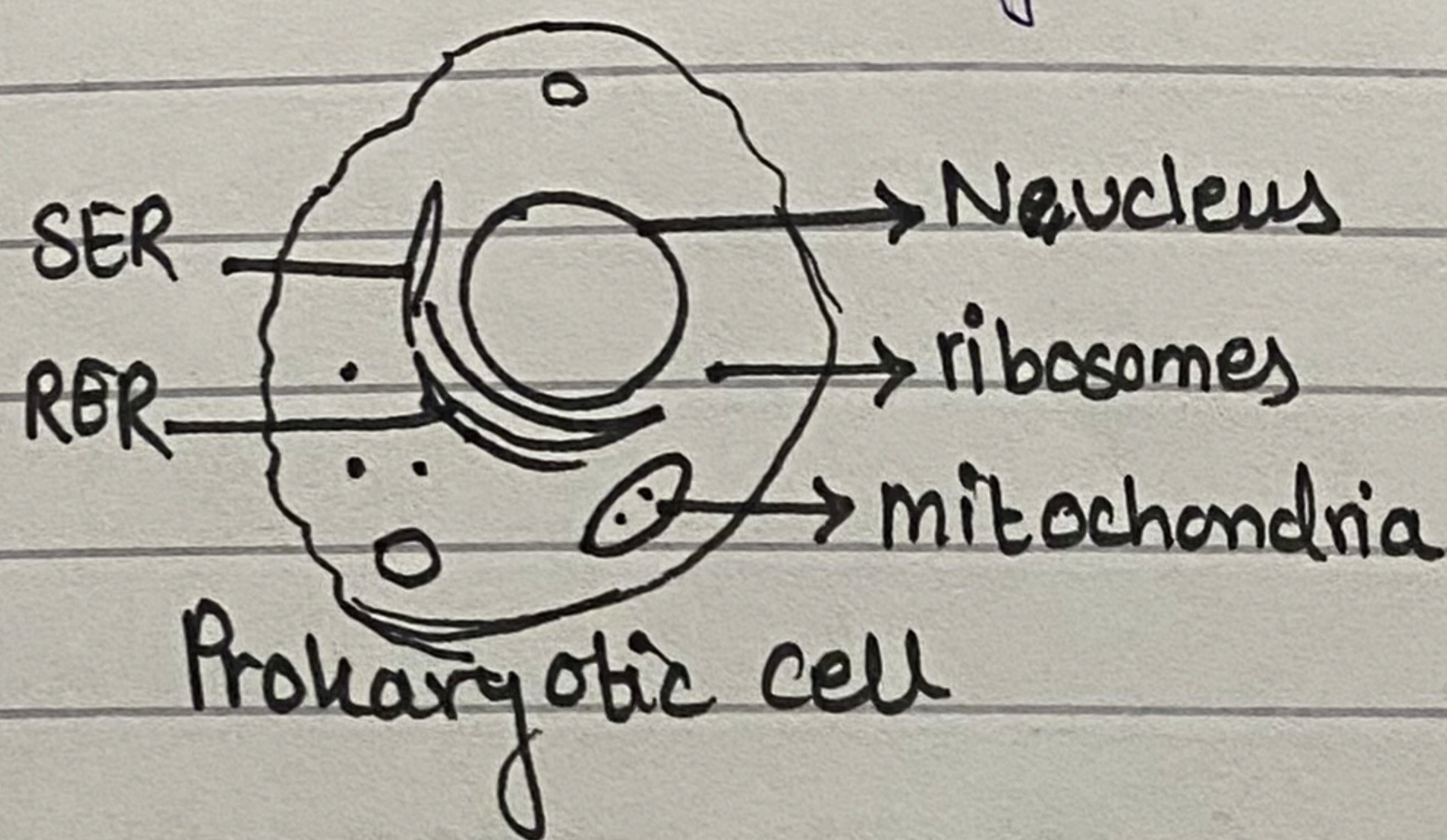
3 \rightarrow nothing

Total \rightarrow 65

$$\text{Probability (chicken pizza)} = \frac{25}{65} = \frac{5}{13}$$

Question 5

a) Eukaryotic cells are those having a nucleus and membrane bound organelles eg ~~but~~ animal cell, Plant cell, fungi etc. Prokaryotic cells are those having no nucleus and no membrane bound organelles, like that of bacteria.



b) Global warming is the rise in the average temperature of the earth. It has many causes, which mainly include ^{excess} green house effect, deforestation etc, and many effect, which include floods, ~~st~~ glacier melting, rise in sea level etc. Kyoto Protocol was an international agreement, signed, ~~for~~ to carbon emissions ~~and~~ hence reducing the ~~a~~ excess GHG effect, in 1997 but enforced in 2005. It was signed in Kyoto city of Japan.

c) GIS, Geographic Information System, is a system ^(software) that stores, analyzes and visualizes geographic data. It is a common feature in smartphones, laptops, computers extra. It helps ~~to~~ in trading, understanding geographic terrain, and making decisions etc.

d) Antioxidants are substances that prohibit the growth of ~~oxidant~~ free radicals or controls oxidation. This is so, because free radicals can cause diseases like cancers, strokes, heart issues etc. Some examples of antioxidants include vitamin C, glutathione, vitamin E, ~~etc~~ etc.

Question 4

a) Hepatitis is the inflammation and swelling of the liver.
Its major causes include, fatty liver, viral infections, Parasites, Bacterial infections etc.

Symptoms:

- 1- Jaundice (Yellowing color in body, eyes)
- 2- Pain in liver
- 3- fever
- 4- Loss of appetite
- 5- Nausea and vomiting

Treatment

a) vaccinations for hepatitis A, B, b) Good hygiene c) anti virals

b) Some of food preservation methods include

Salting → Salting so water content may ~~not~~ release

Sugaring → Sugaring the food

Freezing → keeping in cold temperature for food to freeze

Refrigerating → keeping in the refrigerator

Antioxidation → adding antioxidants to food

c) Substances ^{added} to soil or crops, in order to ~~prevent them from~~ ^{provide them essenti-} al nutrients. Examples include: Nitrogen, Potassium, Phosphorus, Organic substances (animal dung) etc.

d) Tooth anatomy

Crown: visible part of tooth

Root: the part that holds tooth in mouth

Pulp Chamber: Core having blood vessels and nerves

Enamel: Protective outer layer of tooth

Dentin: layer of mineralized tissue ^{under}

PDL: tissue ^{enamel} connecting tooth to bone

