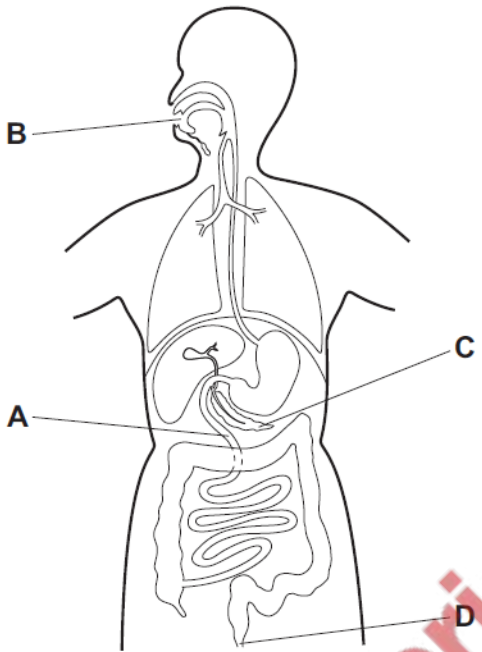
Human nutrition – 2021 IGCSE 0610

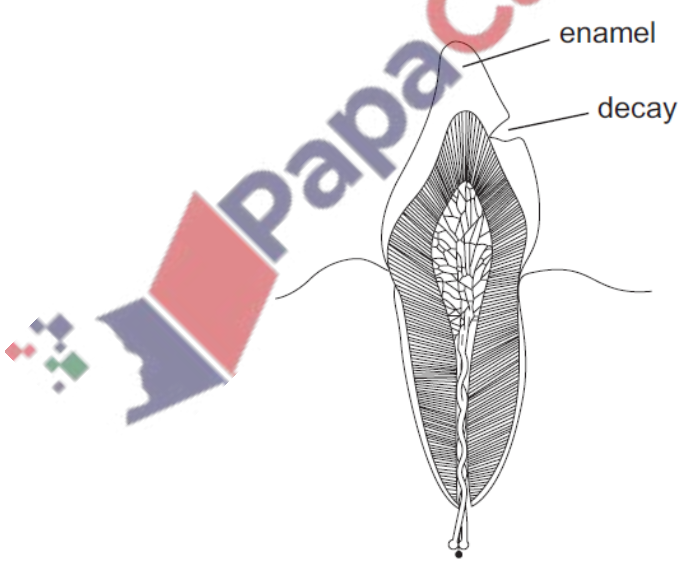
1. March/2021/Paper_12/No.14

Where does egestion take place?



2. March/2021/Paper_12/No.15

The diagram shows a tooth with signs of decay.



What has made the hole in the enamel of the tooth?

A acid

B saliva

C sugar

D toothpaste

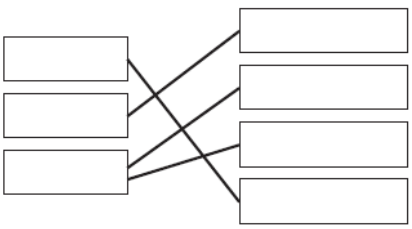
3. March/2021/Paper_12/No.16

The diagram shows enzymes and the products of the reactions they catalyse.

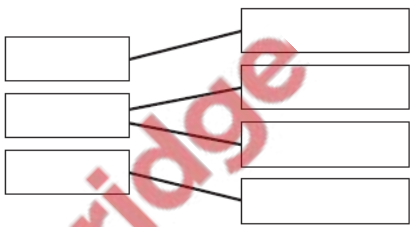
amylase	amino acids
lipase	fatty acids
protease	glycerol
	simple sugars

Which diagram matches the enzymes with the correct products?

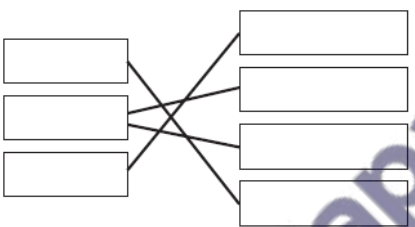
A



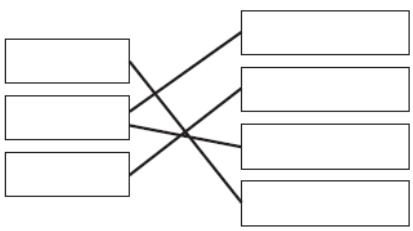
B



C



D



4. March/2021/Paper_32/No.1

Fig. 1.1 is a diagram of the alimentary canal and associated organs.

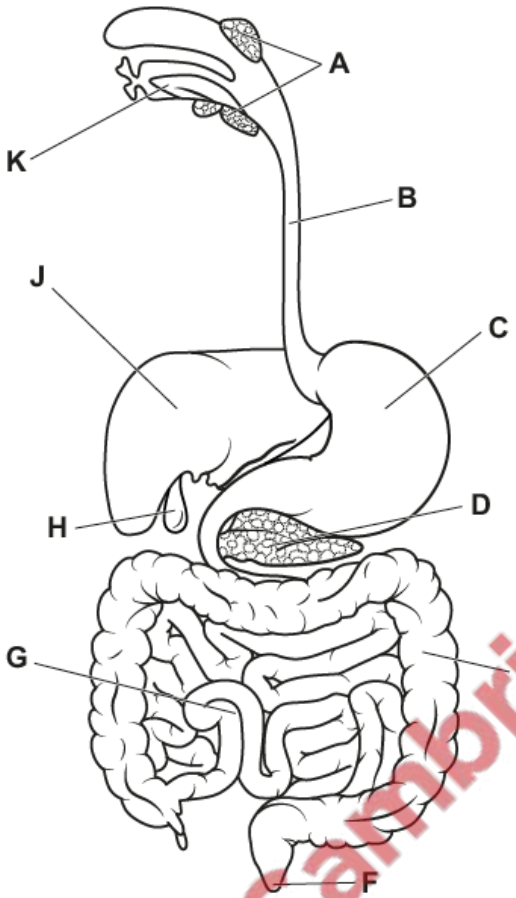


Fig. 1.1

(a) State the letter from Fig. 1.1 that identifies the part where:

alcohol is broken down .....

egestion occurs .....

hydrochloric acid is produced .....

mechanical digestion occurs .....

salivary amylase is produced .....

the most absorption occurs. .....

[6]

(b) State the names of the parts labelled **B** and **H** in Fig. 1.1.

B .....

H .....

[2]

(c) State the names of the **three** parts of the large intestine.

1 .....

2 .....

3 .....

[3]

[Total: 11]

5. March/2021/Paper_42/No.1

(a) Fig. 1.1 is a diagram showing the position of some organs in the human body.

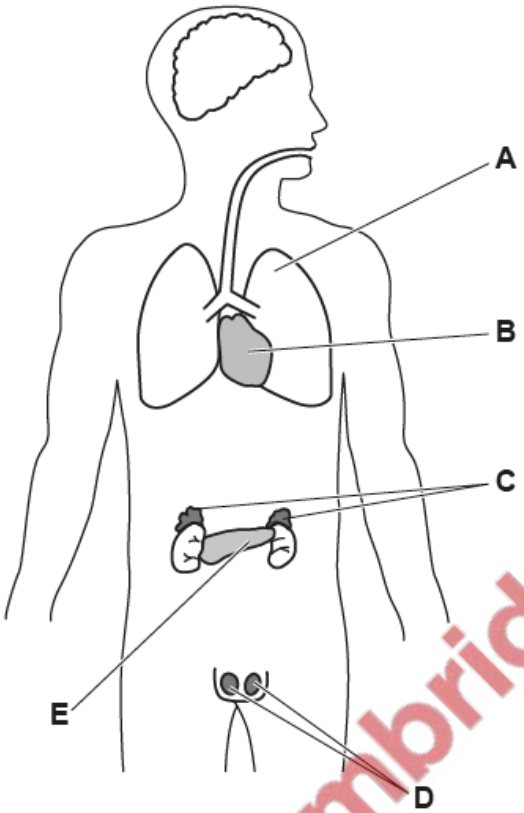


Fig. 1.1

Some of the organs shown in Fig. 1.1 are endocrine glands.

Table 1.1 shows the names of some of the endocrine glands, their identifying letters and the hormones that they produce.

Complete Table 1.1.

Table 1.1

name of endocrine gland	letter in Fig. 1.1	hormone produced
	C	
		insulin
testes		

[3]

(b) Fig. 1.2 shows two graphs representing:

- the relative blood concentrations of two hormones, **A** and **B**, released by the ovaries during the menstrual cycle
- the thickness of the lining of the uterus.

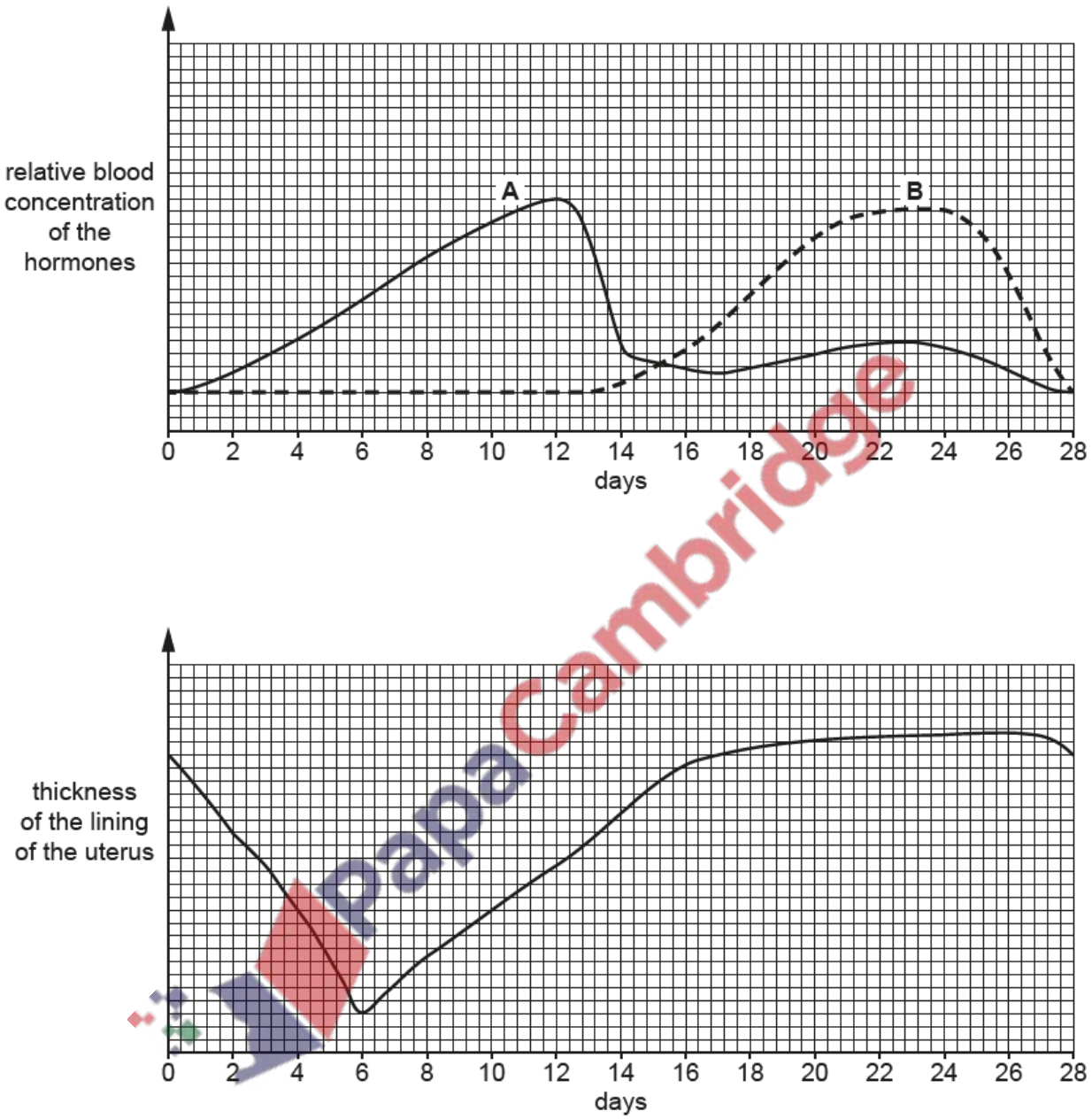


Fig. 1.2

(i) Describe the roles in the menstrual cycle of hormone **A**.

.....

.....

.....

.....

.....

.....

..... [3]

(ii) State the day in Fig. 1.2 when ovulation is most likely to occur.

..... [1]

(iii) State the days in Fig. 1.2 when the lining of the uterus is lost from the body.

..... [1]

(c) The female contraceptive pill is a chemical method of birth control, which is available in many countries.

(i) Describe the social implications of the increased availability of the female contraceptive pill.

.....

.....

.....

.....

..... [2]

(ii) The hormones in the female contraceptive pill can enter rivers.

Describe the negative impacts of female contraceptive hormones entering rivers and contaminating drinking water.

.....

.....

.....

.....

.....

.....

..... [3]

(iii) State **two** barrier methods of contraception.

1 .....

2 .....

[2]

[Total: 15]

6. June/2021/Paper_11/No.14
In humans, where does most of the absorption of digested food take place?

A colon

B kidney

C liver

D small intestine

7. June/2021/Paper_11/No.16
Where does **most** of the absorption of water take place in the alimentary canal?

A colon

B oesophagus

C small intestine

D stomach

8. June/2021/Paper_12/No.10
Starch is digested by amylase in the mouth, but it is not digested in the stomach.

What is the reason for this?

A All starch digestion is completed in the mouth.

B The pH in the stomach is not suitable for the amylase to work.

C The starch does not stay in the stomach long enough to be digested.

D The temperature in the stomach is not suitable for the amylase to work.

9. June/2021/Paper_12/No.14
In humans, where does most of the absorption of digested food take place?

A colon

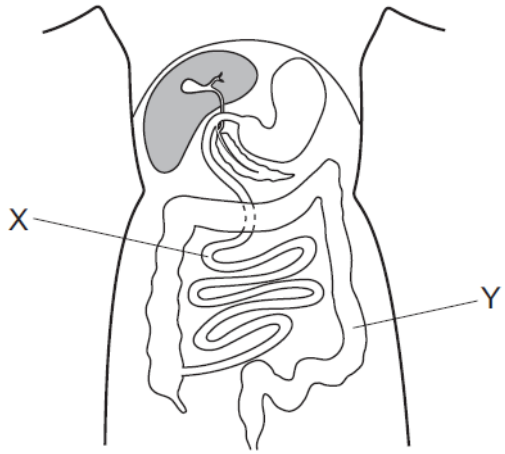
B kidney

C liver

D small intestine

10. June/2021/Paper_12/No.15

The diagram shows part of the human body.



Which statement about organs X and Y is correct?

A X absorbs more water from food than Y.

B X does not absorb water from food.

C Y absorbs more water from food than X.

D Y does not absorb water from food.

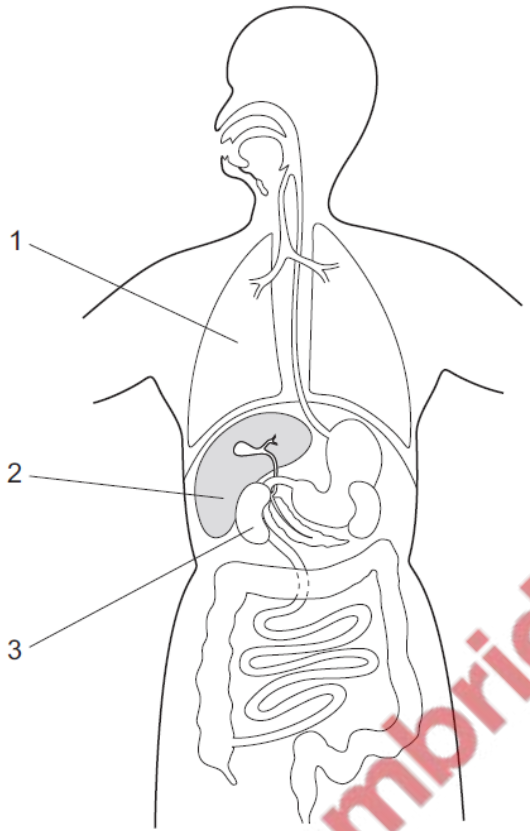
11. June/2021/Paper_12/No.16

What are the functions of human incisors and molars?

	incisors	molars
A	cutting	cutting
B	cutting	grinding
C	grinding	cutting
D	grinding	grinding

12. June/2021/Paper_12/No.25

The diagram shows some of the organs in the human body.



Which row matches the function to the correct organ?

	excretes carbon dioxide	excretes urea	produces urea
A	1	2	3
B	1	3	2
C	2	3	1
D	2	1	3

13. June/2021/Paper_13/No.14

In humans, where does most of the absorption of digested food take place?

A colon

B kidney

C liver

D small intestine

14. June/2021/Paper_13/No.15

What is the cause of the **start** of dental decay?

A Acid dissolves dentine.

B Acid dissolves enamel.

C Sugars dissolve dentine.

D Sugars dissolve enamel.

15. June/2021/Paper_22/No.11

Starch is digested by amylase in the mouth, but it is not digested in the stomach.

What is the reason for this?

A All starch digestion is completed in the mouth.

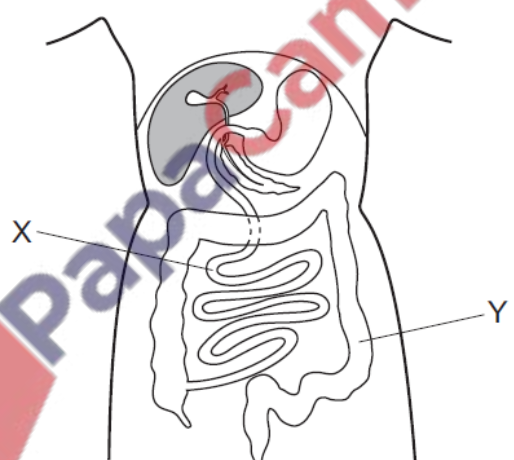
B The pH in the stomach is not suitable for the amylase to work.

C The starch does not stay in the stomach long enough to be digested.

D The temperature in the stomach is not suitable for the amylase to work.

16. June/2021/Paper_22/No.16

The diagram shows part of the human body.



Which statement about organs X and Y is correct?

A X absorbs more water from food than Y.

B X does not absorb water from food.

C Y absorbs more water from food than X.

D Y does not absorb water from food.

17. June/2021/Paper_23/No.11

Starch is digested by amylase in the mouth, but it is not digested in the stomach.

What is the reason for this?

A All starch digestion is completed in the mouth.

B The pH in the stomach is not suitable for the amylase to work.

C The starch does not stay in the stomach long enough to be digested.

D The temperature in the stomach is not suitable for the amylase to work.

18. June/2021/Paper_23/No.16

What is the cause of the **start** of dental decay?

A Acid dissolves dentine.

B Acid dissolves enamel.

C Sugars dissolve dentine.

D Sugars dissolve enamel.

19. June/2021/Paper_32/No.5

(a) Fig. 5.1 shows a section through a human molar tooth.

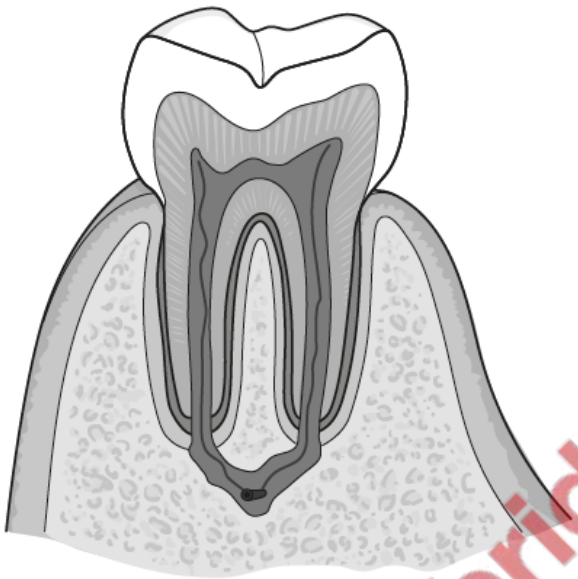


Fig. 5.1

(i) Use label lines and labels to identify these structures **on** Fig. 5.1:

- cement
- gum
- nerves. [3]

(ii) State the function of the canine teeth in humans.

.....

.....

..... [1]

(b) Sheep are herbivores. They do not have canine teeth, or teeth in the front upper jaw.

The other types of teeth in sheep are similar to humans.

Fig. 5.2 shows an x-ray of the teeth in the skull of a sheep.

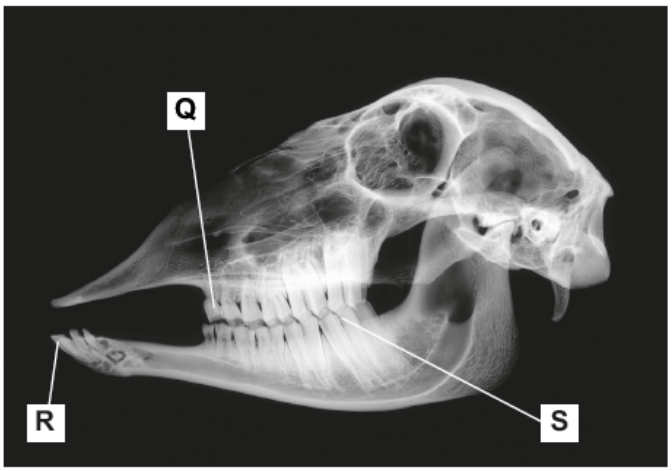


Fig. 5.2

The boxes on the left show a letter from Fig. 5.2.

The boxes in the middle show the name of a type of tooth shown in Fig. 5.2.

The boxes on the right show the function of each type of tooth.

Draw **one** line to link each letter from Fig. 5.2 to its correct name.

Draw **one** line to link each name to its correct function.

Draw a total of **six** lines.

letter from Fig. 5.2	name	function
Q	incisor	biting off pieces of food
R	molar	grinding food
S	premolar	

[5]

(c) State the type of digestion that breaks up large pieces of food.

..... [1]

(d) Fig. 5.3 is a diagram showing the stages of dental decay.

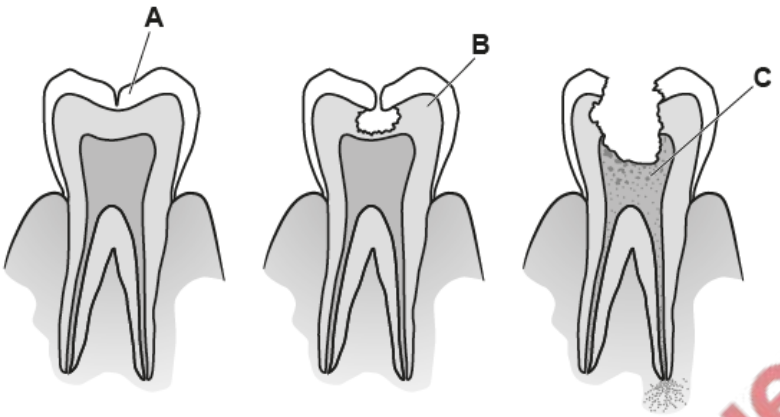


Fig. 5.3

(i) Describe the causes of dental decay.

Use the letters in Fig. 5.3 in your answer.

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.....

.....

.....

.....

.....

.....

.....

..... [4]

(ii) Describe **one** way of preventing dental decay.

.....

.....

..... [1]

[Total: 15]

20. June/2021/Paper_33/No.5

(a) The four boxes on the left contain definitions of processes carried out by the alimentary canal.

The six boxes on the right contain the names of processes.

Draw a straight line to join each definition to the matching process.

Draw only **four** lines.

definition	process
	absorption
The breakdown of large, insoluble molecules into small, soluble molecules.	assimilation
The movement of digested food molecules into the cells of the body where they are used, becoming part of the cells.	chemical digestion
The passing out of food that has not been digested or absorbed, as faeces, through the anus.	egestion
The taking of food substances, e.g. food and drink, into the body through the mouth.	mechanical digestion
	ingestion

[4]

(b) Fig. 5.1 shows yeast being used to produce alcohol.

A mixture of yeast and fruit juice is placed in a jar. Fruit juice contains sugar.

A valve lets gas out of the jar but stops gas from entering the jar.

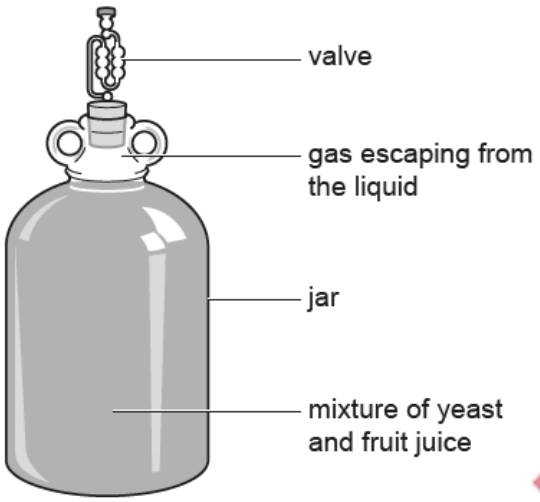

Fig. 5.1

(i) State the name of the process that the yeast uses to make alcohol.

..... [1]

(ii) State the name of the gas produced when yeast makes alcohol.

..... [1]

(iii) State the name of the gas that must be stopped from entering the jar when alcohol is being made.

..... [1]

(iv) State the name of the group of chemicals that yeast uses to catalyse the breakdown of glucose molecules.

Choose your answer from the list.

antibiotics **antibodies** **enzymes** **hormones**

..... [1]

[Total: 8]

21. June/2021/Paper_33/No.9

(a) Fig. 9.1 is a label taken from a container of semi-skimmed milk.

The milk is pasteurised and some of the milk fat has been removed.

Fresh Pasteurised Semi Skimmed MILK	Nutritional information per 100 cm^3 of milk	
	Energy	209 kJ
	Carbohydrate	4.8 g
	Fat	1.7 g
	Protein	3.6 g
	Fibre	0.0 g
	Salt	0.1 g

Fig. 9.1

(i) Fig. 9.1 gives information about five groups of nutrients.

State **two** parts of a balanced diet that are missing from the label.

1 .....

2 .....

[2]

(ii) State the name of the group of organisms that produce milk to feed their young.

..... [1]

(b) **(i)** Describe the dietary importance of fats, carbohydrates and proteins in the human diet.

fats .....

.....

.....

carbohydrates .....

.....

.....

proteins .....

.....

.....

[3]

(ii) State the name of the element which is present in a protein but which is **not** found in fats or carbohydrates.

..... [1]

(c) Some doctors recommend that people with a risk of coronary heart disease should drink skimmed or semi-skimmed milk instead of whole milk.

State **two** risk factors for coronary heart disease, **other than** diet.

1 .....

2 .....
[2]

[Total: 9]

(a) **(i)** The main component of milk is a liquid that is an important solvent in the body.

State the name of this solvent.

..... [1]

(ii) Table 1.1 shows some of the nutrients found in human milk, the elements that make up the nutrients, the enzymes that digest them and the products of digestion.

Complete Table 1.1.

Table 1.1

nutrient	elements	enzyme	products of digestion
protein			
fat			
lactose (milk sugar)	C, H, O		galactose and glucose (simple sugars)

[4]

(b) Milk also contains vitamins and mineral salts.

(i) Explain why vitamin D is important for the nutrition of children.

.....

.....

.....

.....

.....

.....

..... [3]

(ii) Explain why iron is important in the diet.

.....

.....

.....

.....

.....

..... [2]

(c) Rubella and kwashiorkor are two diseases that affect children.

Rubella is a transmissible disease and kwashiorkor is a non-transmissible disease.

(i) Define the term transmissible disease.

.....

.....

.....

..... [2]

(ii) Explain why women should be vaccinated against rubella before they reach reproductive age.

.....

.....

.....

.....

.....

.....

.....

..... [4]

(iii) Outline the causes of kwashiorkor.

.....

.....

.....

.....

..... [2]

[Total: 18]