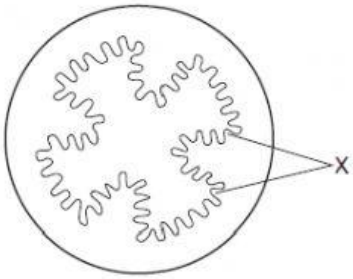
NAME: **CLASS:** **DATE:**

BIOLOGY REVISION

TOPIC: ANIMAL NUTRITION

Multiple Choice Questions:

1. The diagram represents a section through the small intestine. [Nov 2008, Q8]



What is the role of the structures labelled X?

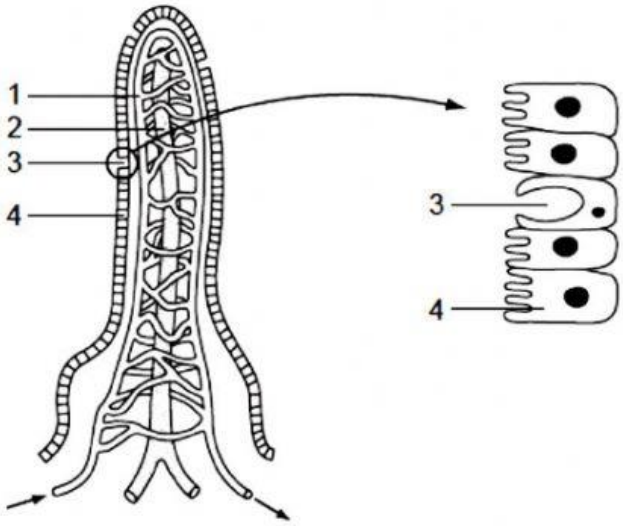
A They help to move the food along

B They make a large surface area for absorption

C They protect against bacteria

D They move mucus over the surface

2. The diagram represents a villus. [Nov 2008, Q9]



Which sequence correctly describes the functions of the numbered parts?

	1	2	3	4
A	Absorbs digested fats	Absorbs glucose	Produces enzymes	Produces mucus
B	Absorbs digested fats	Absorbs glucose	Produces mucus	Produces enzymes
C	Absorbs glucose	Absorbs digested fats	Produces enzymes	Produces mucus
D	Absorbs glucose	Absorbs digested fats	Produces mucus	Produces enzymes

LIVEWORKSHEETS

3. It has been shown that animals restricted to a diet of milk only, eventually suffer from blood disorders involving a lack of pigment in their red blood cells.

Which is the most likely explanation of this? [Nov 2008, Q10]

A Milk is deficient in iron

B Milk contains more calcium than is required by most animals

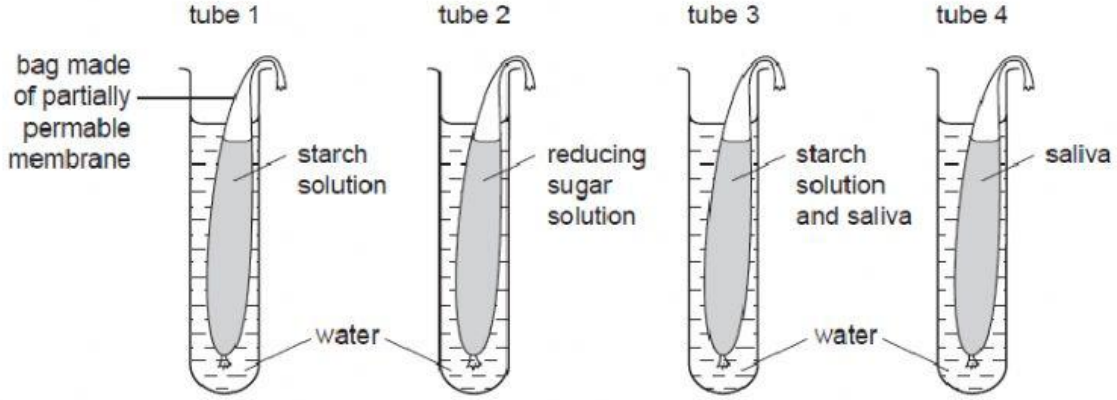
C Milk is deficient in vitamin A

D Milk contains no roughage

4. Which row in the table correctly identifies the deficiency diseases caused by lack of vitamin C, calcium and iron? [Nov 2009, Q8]

	Lack of vitamin C	Lack of calcium	Lack of iron
A	Anaemia	Rickets	Scurvy
B	Brittle bones	Anaemia	Rickets
C	Rickets	Scurvy	Brittle bones
D	Scurvy	Brittle bones	Anaemia

5. Four bags made of partially permeable membrane are placed in tubes of water as shown in the diagram.



After 20 minutes at the 35°C a sample of the water around the bag in each tube is boiled with Benedict's solution.

What are the expected results? [Nov 2009, Q9]

	Tube 1	Tube 2	Tube 3	Tube 4
A	Blue	Orange	Blue	Orange
B	Blue	Orange	Orange	Blue
C	Orange	Blue	Orange	Blue
D	Orange	Orange	Blue	Orange

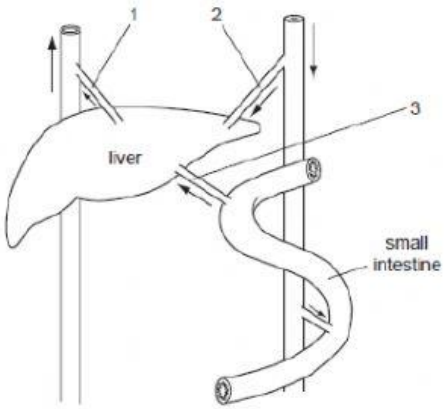
LIVEWORKSHEETS

6. Four foods were analysed for protein, fat and carbohydrate. [Nov 2009, Q10]

Which food contains the most energy in a 100 g portion?

	Protein %	Fat %	Carbohydrate %
A	20	7	1
B	10	9	20
C	4	5	6
D	0.5	0.5	5

7. The diagram represents the liver and associated blood vessels. [Nov 2010, Q1]



After a meal, how is the blood affected by the liver as it passes between these blood vessels?

	Blood vessels	Effect of liver
A	2 to 1	Glucose added
B	2 to 1	Urea removed
C	3 to 1	Glucose added
D	3 to 1	Urea removed

8. The symptoms of a disease include weakness, fatique, aching and swollen joints, bruise-like spots round the hair follicles and swollen and soft gums. [Nov 2010, Q2]

Which food is used to treat this disease?

A Liver as a source of iron

B Milk as a source of calcium

C Oily fish as a source of vitamin D

D Oranges as a source of vitamin C

LIVEWORKSHEETS

9. Which chemical test shows the presence of an enzyme in a biological washing powder? [Nov 2010, Q3]

A Benedict's

B Biuret

C Ethanol emulsion

D Iodine solution

10. Vitamin C changes cholesterol into a form which is less likely to be deposited in artery walls.
Which dietary advice would help prevent coronary heart disease? [Nov 2010, Q4]

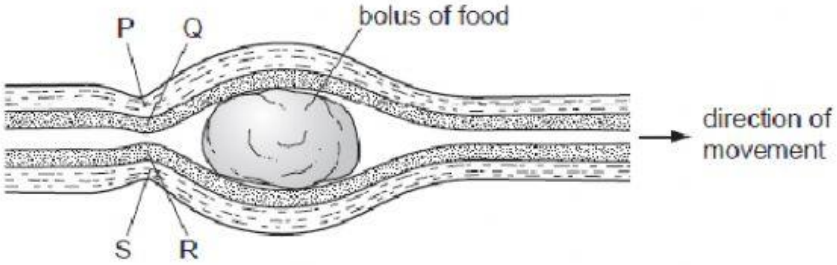
A Eat more bread and less meat

B Eat more butter and less bread

C Eat more meat and less oranges

D Eat more oranges and less butter

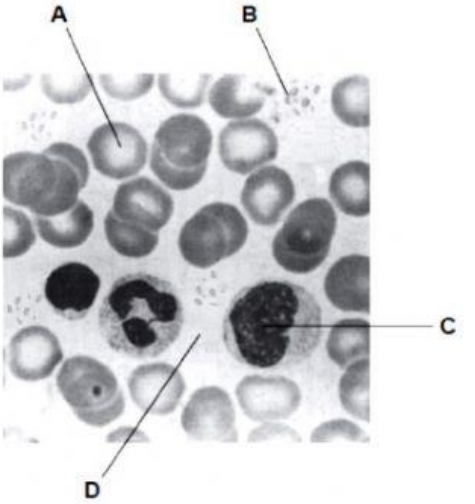
11. The diagram shows a bolus of food moving along the oesophagus. [Nov 2011, Q8]



Which row describes the condition of the muscles at P, Q, R and S?

	P	Q	R	S
A	Contracted	Relaxed	Contracted	Relaxed
B	Contracted	Relaxed	Relaxed	Contracted
C	Relaxed	Contracted	Contracted	Relaxed
D	Relaxed	Contracted	Relaxed	Contracted

12. The photomicrograph shows human blood.
Which component cannot function effectively if a person's diet lacks iron? [Nov 2011, Q9]



magnification ×1000

LIVEWORKSHEETS

13. Which chemical elements are found in carbohydrates, fats and proteins? [Nov 2011, Q10]

	Carbohydrates	Fats	Proteins
A	Carbon, hydrogen and oxygen	Carbon, hydrogen and oxygen	Carbon, hydrogen, oxygen and nitrogen
B	Carbon, hydrogen and oxygen	Carbon, hydrogen, oxygen and nitrogen	Carbon, hydrogen and oxygen
C	Carbon, hydrogen, oxygen and nitrogen	Carbon, hydrogen and oxygen	Carbon, hydrogen and oxygen
D	Carbon, hydrogen, oxygen and nitrogen	Carbon, hydrogen and oxygen	Carbon, hydrogen, oxygen and nitrogen

14. Which blood vessel carries absorbed food material from the small intestine to the liver? [Nov 2011, Q12]

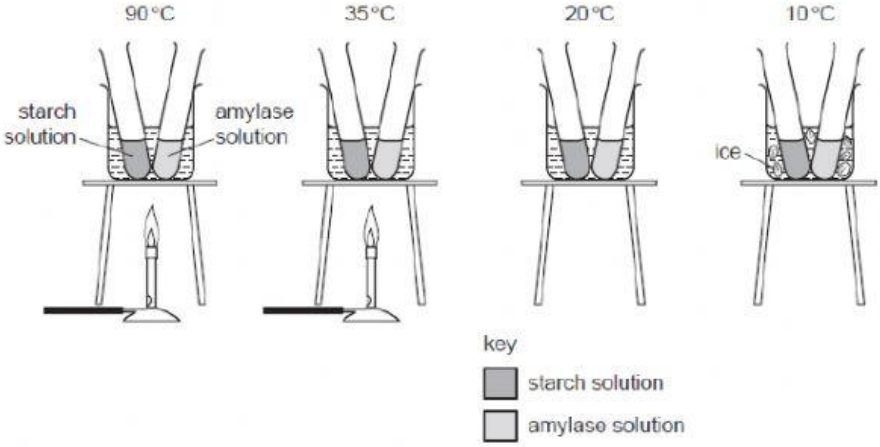
A Coronary artery

B Hepatic portal vein

C Pulmonary artery

D Renal vein

15. The diagram shows an experiment on amylase.
Each beaker contains water at the temperature shown. [Nov 2011, Q13]



After five minutes, each test-tube of amylase is poured into the test-tube of starch solution in the same beaker.

After leaving the tubes for 5 minutes, samples of the mixture are then tested with iodine solution and then tested again at 5 minute intervals. Which results are expected?

	90°C	35°C	20°C	10°C
A	Blue-black after 30 minutes	Goes yellow-brown immediately	Goes yellow-brown after 5 minutes	Blue-black after 30 minutes
B	Blue-black after 30 minutes	Goes yellow-brown after 5 minutes	Goes yellow-brown immediately	Blue-black after 30 minutes
C	Goes yellow-brown immediately	Goes yellow-brown after 5 minutes	Goes yellow-brown after 5 minutes	Blue-black after 30 minutes
D	Goes yellow-brown after 5 minutes	Blue-black after 30 minutes	Blue-black after 30 minutes	Goes yellow-brown after 5 minutes

LIVEWORKSHEETS

16. A person tries eating a diet consisting only of lettuce leaves and water. [Nov 2012, Q8]
Which condition might develop?

A Constipation

B Heart disease

C Rickets

D Scurvy

17. When a person eats some egg white, protein and water enter the stomach. Which substances are found leaving the stomach and leaving the small intestine? [Nov 2012, Q9]

	Leaving the stomach	Leaving the small intestine
A	Amino acids and water	Amino acids and water
B	Fatty acids, glycerol and water	Fatty acids, glycerol and water
C	Protein and water	Fatty acids and glycerol
D	Protein, amino acids and water	Water

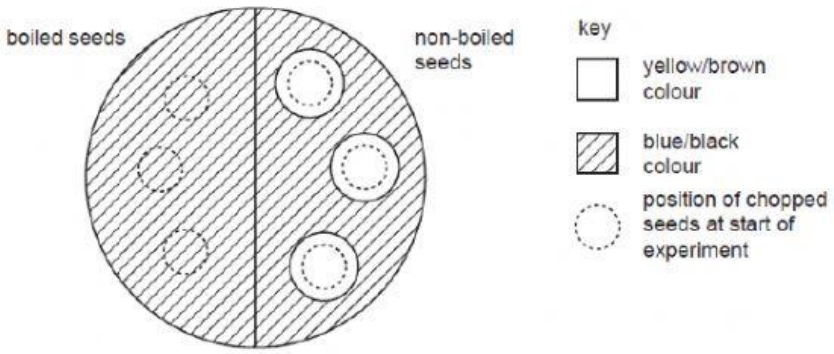
18. The table shows the compositions of four foods. [Nov 2012, Q10]
Which food provides the most energy per gram?

	Carbohydrate %	Fat %	Protein %	Water %
A	1	16	28	55
B	2	83	2	13
C	5	4	3	88
D	25	20	23	35

LIVEWORKSHEETS

19. Six bean seeds were soaked in cold water. Three of them were boiled and cooled. The boiled and the non-boiled seeds were chopped up and then placed on the surface of agar jelly containing starch.

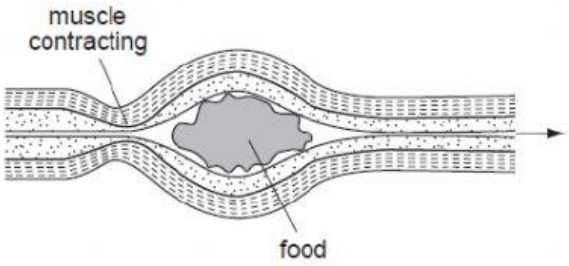
After two days, all the seeds were removed and the jelly was tested with iodine solution.
The diagram shows the results of the experiment.



What is the explanation for the results with the non-boiled bean seeds? [Nov 2012, Q34]

A They absorb iodine
B They absorb starch
C They contain acid
D They contain amylase

20. The diagram shows some food moving through the digestive system. [Nov 2013, Q8]



Which process is shown?

A Diffusion
B Digestion
C Ingestion
D Peristalsis

LIVEWORKSHEETS

Structured Questions:

1. Fig. 4.1 shows diagrammatically the action of enzymes on two different food molecules. [June 2008, Q4]

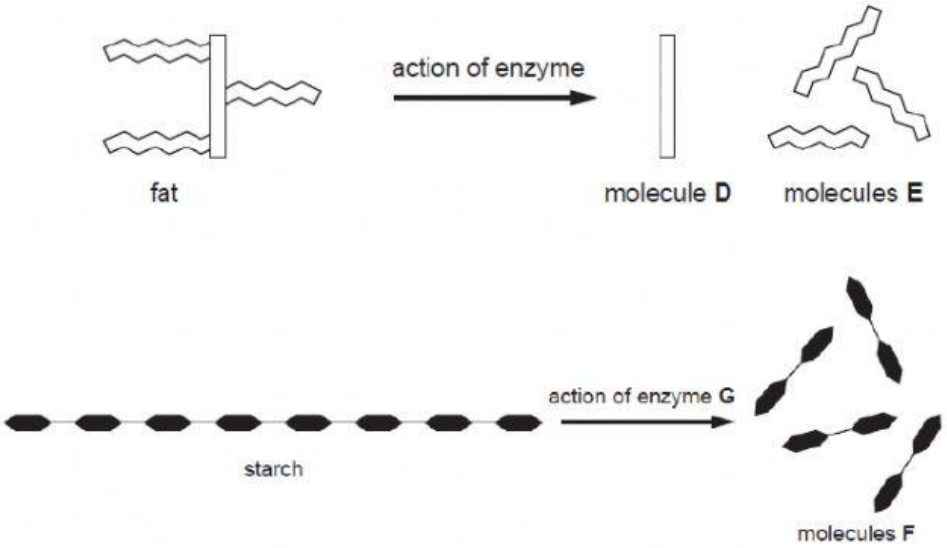


Fig. 4.1

(a) Identify the molecules shown in Fig. 4.1.

D _____

E _____

F _____ [3]

(b) Identify enzyme **G**. _____ [1]

(c) It has been found that fresh pineapple contains an enzyme that can be used to make meat more tender.

(i) Explain why the pineapple is placed on the meat a few hours before, rather than during, cooking.

_____

_____

_____ [3]

(ii) Suggest the name of the enzyme and how it tenderizes the meat.

_____

_____

_____

_____ [3]

[Total: 10]

LIVEWORKSHEETS

2. (a) List the chemical elements that make up [June 2009, Q6]

(i) Fats _____

(ii) Proteins _____ [2]

(b) Explain why each of the following are important constituents of a balanced diet.

(i) carbohydrates

_____

_____

_____

_____

_____

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_____

(ii) vitamins

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(iii) water

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[8]

[Total: 10]

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