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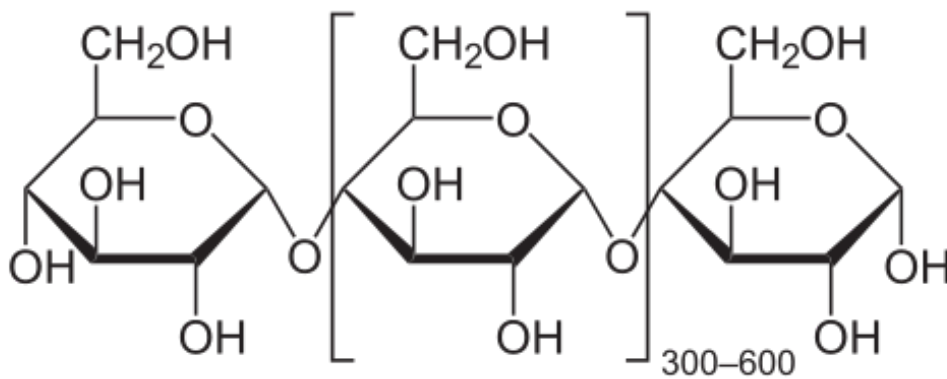
Class:



IGCSE BIOLOGY EDEXCEL 9-1

CHAPTER WORKBOOK

Human Nutrition



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Balanced Diet

1. Define *balanced diet*.

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.....

2. Complete the table to summarise the components and sources of a balanced diet.

Component		Dietary sources	Functions
Carbohydrates	Sugars		
	Starch		
Proteins			
Lipids (fats and oils)			
Vitamins	vitamin A		
	vitamin C		
	vitamin D		
Minerals	Calcium		
	iron		
Fibre			



2. Describe the effects of a diet deficient in the following food components. Name the deficiency disease where relevant.

Protein

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Fibre

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Vitamin A

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Vitamin C

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Vitamin D

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Iron

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3. Explain why the following people may have specific food and energy requirements.

A pregnant woman

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A person with a labour-intensive job

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A teenager

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An elderly person

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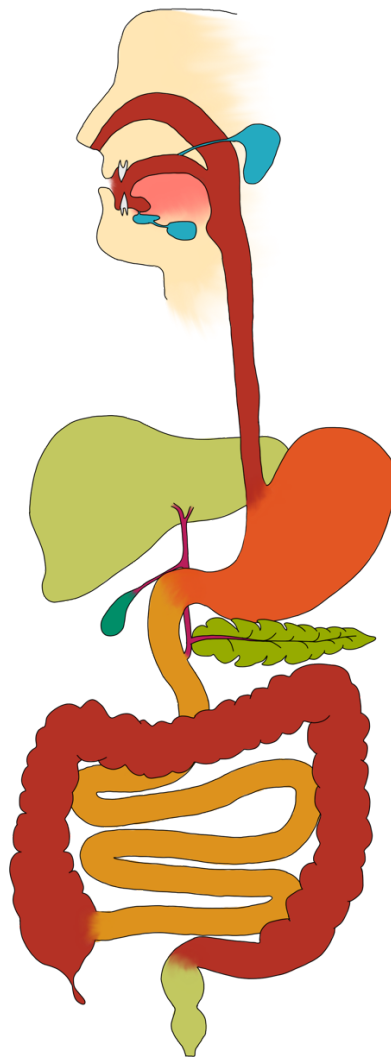
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The Digestive System

1. Label the diagram of the digestive system.

Liver Ileum Colon Stomach
Gall Bladder Anus Duodenum
Large Intestine Oesophagus Mouth
Rectum Salivary glands Pancreas
Small intestine



Digestion

2. Draw a labeled diagram to summarise peristalsis.

2.

a) Define digestion

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b) Describe mechanical digestion

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c) Describe chemical digestion

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3.

a) Define enzyme.

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b) Complete the table to summarise digestive enzymes.

Enzyme	Source(s) of secretion	Substrate	Product(s)
			Maltose
		Maltose	
		Proteins	
			Fatty acids and glycerol



4.

a) Describe how bile enters the alimentary canal.

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b) Explain the roles of bile

Emulsification

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Neutralisation

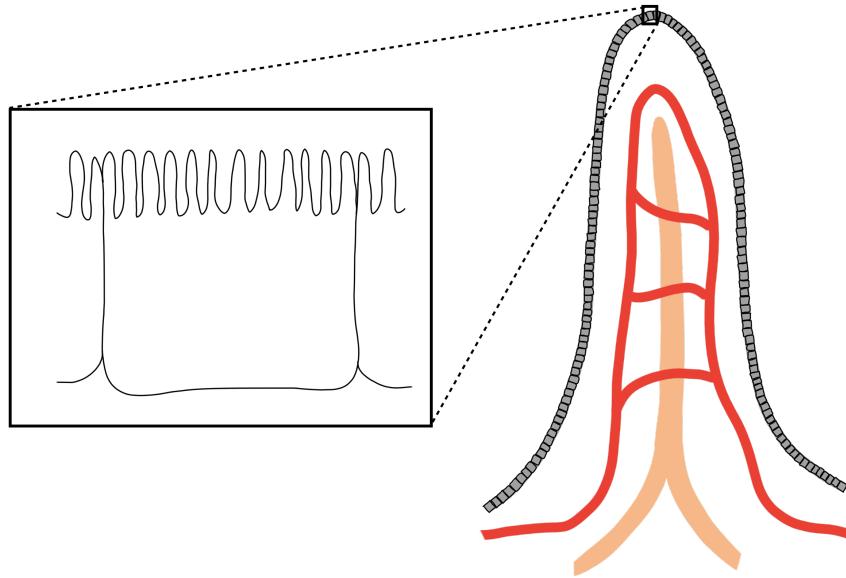
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Absorption

1. Label the diagram of an intestinal villus.

- Lacteal*
- Epithelial cell*
- Epithelial lining*
- Microvilli*
- Blood Capillaries*
- Villus*



2. Describe absorption in the small intestine. Include reference to named biological molecules.

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3. Explain how the intestinal villi are adapted for their function. Use the heading to guide you.

Lacteal

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Blood

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Surface Areal

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