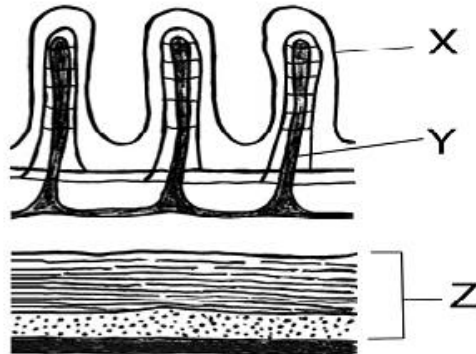


Name: \_\_\_\_\_

## Q.1

- (a) The diagram shows part of a transverse section through the small intestine.



- (i) Name structures X and Y.
- (ii) What process results from the contraction of the two parts of tissue Z?
- (iii) **In your answer book**, indicate which of the following most accurately represents the pH of the contents of the small intestine.
- Acidic.                      Neutral.                      Alkaline.
- (iv) Name **two** glands that pass their secretions into the small intestine.
- (v) 1. What are *symbiotic* bacteria?  
2. Give **two** functions of symbiotic bacteria in the human alimentary canal.
- (vi) Where in the human alimentary canal is most water absorbed?

(30)

## Q.2 Complete the blanks in the table below.

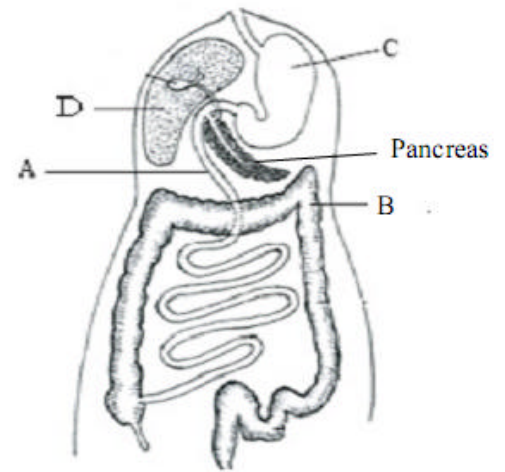
| Summary of the digestive process (the enzymes are highlighted) |                |                |              |                            |                                 |
|--|----------------|----------------|--------------|----------------------------|---------------------------------|
| Substance  | Made in        | Active in      | Preferred pH | Substrate                  | Product                         |
| <b>Amylase (enzyme)</b>  |                | <b>Mouth</b>   |              | <b>Starch</b>              |                                 |
| <b>Pepsin (enzyme)</b>   |                | <b>Stomach</b> |              |                            |                                 |
| Hydrochloric acid  | Stomach lining |                | –            | Bacteria and fibrous foods | Dead bacteria and softened food |
| Sodium hydrogen carbonate                                      | Pancreas       |                | –            | Acid                       | Neutralises acid                |
| <b>Amylase (enzyme)</b>  |                |                |              |                            |                                 |
| <b>Lipase (enzyme)</b>   |                |                |              |                            |                                 |
| Bile salts   | Liver          | Duodenum       | –            | Lipids                     | Lipid droplets                  |
| Sodium hydrogen carbonate                                      | Liver          | Duodenum       | –            | Acid                       | Neutralises acid                |

(19)

## Q.3

The diagram shows the human digestive system.

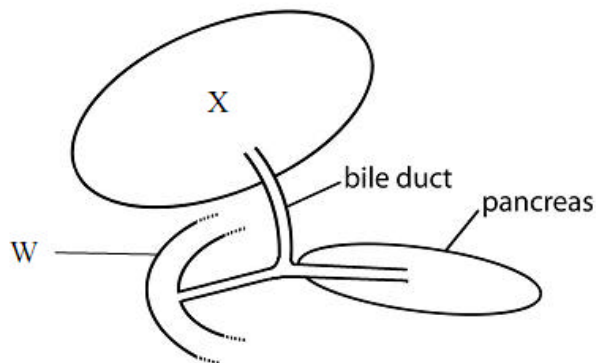
- (i) Name the parts labelled A, B and C.
- (ii) Explain the term *digestion*?
- (iii) Name **one** human tooth type **and** give its function.
- (iv) Part C secretes hydrochloric acid onto the ingested food.  
Give **one** function of this acid.
- (v) Give **one digestive** function of part D.
- (vi) Give **one digestive function and one non-digestive** function of the pancreas.



(27)

## Q.4

The diagram shows part of the human alimentary canal and associated structures.



- (i) What part of the alimentary canal is labelled W? \_\_\_\_\_
- (ii) The bile duct is connected to X. Name X. \_\_\_\_\_
- (iii) From which part of the alimentary canal does food arrive into W? \_\_\_\_\_
- (iv) State **one** digestive function of the pancreas. \_\_\_\_\_

(20)