

Nutrition and the Human Digestive System

Nutrisi dan Sistem Pencernaan Manusia

PAPER 1

- 1 The following information is about process X in the human digestive system.

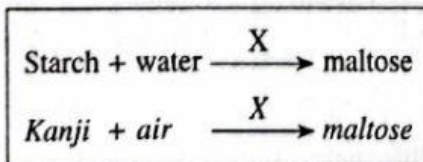
Maklumat berikut adalah tentang proses X dalam sistem pencernaan manusia.

- Physical digestion.
Pencernaan fizikal.
- Rhythmic contraction and relaxation of muscle.
Pengecutan dan pengenduran otot secara beritma.
- Pushes the bolus through the oesophagus until the stomach.
Menolak bolus melalui esofagus sehingga ke perut.

What is process X?

Apakah proses X?

- A Peristalsis/Peristalsis
B Homeostasis/Homeostasis
C Hydrolysis/Hidrolisis
- 2 The equation below shows the process of carbohydrate digestion in the mouth.
Persamaan di bawah menunjukkan proses pencernaan karbohidrat di dalam mulut.



What is X?

Apakah X?

- A Maltase/Maltase
B Amylase/Amilase
C Lactase/Laktase
D Lipase/Lipase

- 3 The diagram below shows an internal organ in the human body.

Rajah di bawah menunjukkan satu organ dalaman di dalam badan manusia.



What nutrient is digested in this organ?

Nutrien apakah yang dicernakan di dalam organ ini?

- A Carbohydrate/Karbohidrat
B Lipid/Lemak
C Protein/Protein
D Vitamin/Vitamin
- 4 What are the functions of hydrochloric acid in the stomach?
Apakah fungsi asid hidroklorik di dalam perut?
- I Prepares a suitable pH for pepsin to act
Menyediakan pH yang sesuai untuk pepsin bertindak
II Stops digestion of carbohydrate
Menghentikan pencernaan karbohidrat
III Activates the digestion of lipid
Mengaktifkan pencernaan lipid
IV Activates the digestion of carbohydrate
Mengaktifkan pencernaan karbohidrat
- A I and II
I dan II
B II and III
II dan III
C III and IV
III dan IV
D I and IV
I dan IV

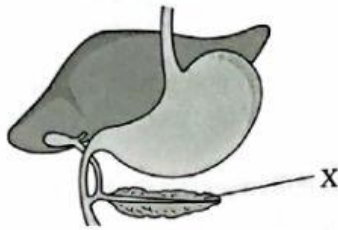
- 5 Which equations shows the enzymatic reaction in the small intestine?

Persamaan yang manakah menunjukkan tindak balas enzim di dalam usus kecil?

- A Starch + water $\xrightarrow{\text{Amylase}}$ Sucrose
Kanji + air $\xrightarrow{\text{Amilase}}$ Sukrosa
- B Protein + water $\xrightarrow{\text{Pepsin}}$ Polypeptide
Protein + air $\xrightarrow{\text{Pepsin}}$ Polipeptida
- C Lactose + water $\xrightarrow{\text{Lactase}}$ Fructose
Laktosa + air $\xrightarrow{\text{Laktase}}$ Fruktosa
- D Lactose + water $\xrightarrow{\text{Lactase}}$ Glucose + Galactose
Laktosa + air $\xrightarrow{\text{Laktase}}$ Glukosa + Galaktosa

- 6 The diagram below shows a part of the human digestive system.

Rajah di bawah menunjukkan sebahagian daripada sistem pencernaan manusia.



What will happen if X is not working?

Apakah yang akan berlaku jika X tidak berfungsi?

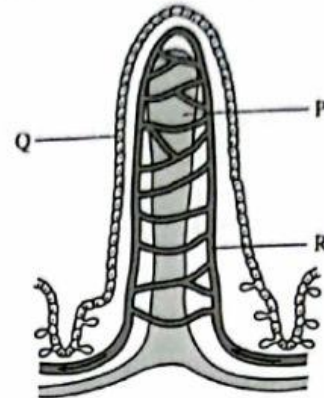
- A More toxin will be removed
Lebih banyak toksin akan disingkirkan
- B Malnutrition
Kekurangan nutrisi
- C Production of glucose increases
Penghasilan glukosa meningkat
- D Production of pepsin increases
Penghasilan pepsin meningkat
- 7 What are the adaptations of the villus for absorption of digested food?

Apakah penyesuaian vilus untuk penyerapan makanan yang dicerna?

- I Elastic wall
Dinding yang elastik
- II Long villus
Vilus yang panjang
- III Thin epithelial layer
Lapisan epitelium yang nipis
- IV Goblet cells secrete mucus
Sel goblet merembeskan mukus

- A I and III dan II
 B II and III/II dan III
 C III and IV/III dan IV
 D I and IV/II dan IV

- 8 The diagram below shows a structure of villus.
Rajah di bawah menunjukkan struktur vilus.



What are P, Q and R?

Apakah P, Q dan R?

	P	Q	R
A	Epithelial cell <i>Sel epitelium</i>	Blood capillary <i>Kapilari darah</i>	Lacteal <i>Lakteal</i>
B	Blood capillary <i>Kapilari darah</i>	Lymphatic vessel <i>Salur limfa</i>	Lacteal <i>Lakteal</i>
C	Lacteal <i>Lakteal</i>	Epithelial cell <i>Sel epitelium</i>	Blood capillary <i>Kapilari darah</i>
D	Lacteal <i>Lakteal</i>	Blood capillary <i>Kapilari darah</i>	Epithelial cell <i>Sel epitelium</i>

- 9 What nutrient can be found in the blood capillary of the villus?

Nutrien apakah yang ditemui di dalam kapilari darah vilus?

- A Vitamin A
 B Vitamin D
 C Vitamin E
 D Vitamin C