11 Which of the following occurs during S phase?
Manakah di antara berikut berlaku semasa fasa S?

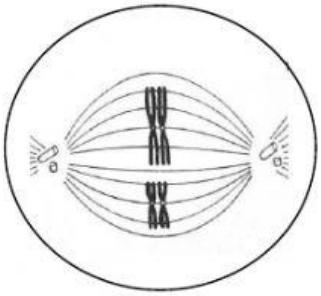
A Store energy
Menyimpan tenaga
B Replication of DNA
Replikasi DNA
C Formation of spindle fibres
Pembentukan gentian gelendung
D Increasing the number of organelles
Bilangan organel bertambah

12 Which of the following is correct about uncontrolled cell division?
Manakah di antara berikut adalah benar tentang pembahagian sel yang tidak terkawal?

I. Substances such as formaldehyde can cause cancer
Bahan-bahan seperti formaldehid boleh menyebabkan kanser
II. When cancerous cells divide uncontrollably, a tumor is formed
Apabila sel-sel kanser membahagi tanpa kawalan, tumor terbentuk.
III. When formed, cancerous cells can compete with normal cells for nutrients and energy
Apabila sel-sel kanser terbentuk, sel-sel kanser bersaing dengan sel-sel normal untuk nutrien dan tenaga
IV. Uncontrolled meiosis occurs due to severe disruption to the mechanism that controls the cell division
Meiosis yang tidak terkawal berlaku disebabkan gangguan teruk kepada mekanisma yang mengawal pembahagian sel.

A. I, II and III only
I, II dan III sahaja
B. I, II and IV only
I, II dan IV sahaja
C. I, III and IV only
I, III dan IV sahaja
D. II, III and IV only
II, III dan IV sahaja

13 Diagram 7 shows a cell during cell division process.
Rajah 7 menunjukkan satu sel semasa proses pembahagian sel.



What is the chromosomal number in the daughter cell after cell division is completed?
Berapakah bilangan kromosom sel anak selepas pembahagian sel lengkap?

A 2 B 4
C 8 D 16

14 Diagram 8 shows an event during meiosis.

Rajah 8 menunjukkan satu peristiwa semasa meiosis.

Which of the following describes the event?

Antara yang berikut yang manakah menerangkan peristiwa tersebut?

A Spindle fibre breaks down
Gentian gelendung terurai

B Exchange of genetic materials occur
Pertukaran bahan genetik berlaku

C Reformation of nuclear membrane
Pembentukan membran nukleus

D Chromosomes replication takes place
Replikasi kromosom berlaku.

18 The following measurements were made during an experiment to determine the energy value of food F.

Bacaan berikut diambil semasa eksperimen untuk menentukan nilai tenaga dalam makanan F.

Mass of food F / Jisim makanan F = 4 g

Mass of water / jisim air = 10 g

Initial water temperature / Suhu awal air = 28°C

Final water temperature / Suhu akhir air = 60°C

What is the energy value of food F?

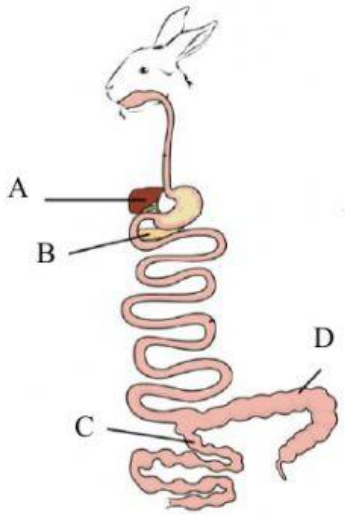
Apakah nilai tenaga makanan F?

A. 240Jg-1 B. 336Jg-1

C. 448Jg-1 D. 484Jg-1

19 Diagram 10 shows the digestive system of a rabbit.

Rajah 10 menunjukkan sistem pencernaan bagi arnab.



Which part, A, B, C or D is the caecum?

Antara bahagian A, B, C dan D, yang manakah sekum?

20 The statement below is related to the inhalation in a fish.

Penyataan di bawah berkaitan dengan ikan menarik nafas.

- The operculum cavity is bigger
  Rongga operkulum menjadi lebih besar
- The operculum is closed
  Operkulum tertutup

What happen if the operculum is damaged?

Apakah yang akan berlaku sekiranya operkulum rosak?

A. The pressure in its buccal cavity decreases
Tekanan di dalam rongga mulutnya berkurang

B. The pressure in its buccal cavity increases
Tekanan di dalam rongga mulut bertambah

C. The operculum closes due to the pressure in the buccal cavity
Operkulum tertutup akibat tekanan dalam rongga mulut

D. Gaseous exchange cannot take place.
Pertukaran gas tidak dapat berlaku.

21 The oxygen level in the blood of a mountain climber drops from its normal level during mountain climbing. Which process occur in his respiratory system to return the oxygen level to normal.

Aras oksigen dalam darah seorang pendaki gunung jatuh di bawah aras normal semasa mendaki gunung. Proses manakah yang berlaku dalam sistem respirasinya untuk mengembalikan aras oksigen ke normal?

I pH of blood decrease
pH darah menurun

II Breathing and ventilation rate increase
Kadar pernafasan dan ventilasi meningkat

III Respiratory muscles contract and relax faster
Otot respirasi mengecut dan mengendur dengan lebih cepat

IV Intercostal muscles contract and relax slower
Otot interkosta mengecut dan mengendur dengan lebih lambat

A I and II
I dan II

B II and III
II dan III

C I and IV
I dan IV

D III and IV
III dan IV

23 Two species of organisms have a relationship where one of the organisms actually harms the other through the relationship.

What is this relationship?

Dua spesies organisma mempunyai hubungan dengan keadaan salah satu organisma merugikan pasangannya.

Apakah hubungan ini?

A Mutualism
Mutualisme

B Parasitism
Parasitisme

C Saprophytism
Saprofitisme

D Commensalism
Komensalisme

24 Why full cream milk is kept refrigerated after opened?

Mengapakah susu penuh krim perlu disimpan dalam peti sejuk selepas dibuka?

A Low temperature kills the bacteria

Suhu rendah membunuh bakteria

B There is no bacteria in a refrigerator

Tiada bakteria terdapat dalam peti sejuk

C Low temperature prevents bacterial growth

Suhu rendah mencegah pertumbuhan bakteria

D Enzymes in the milk are active at room temperature

Enzim di dalam susu adalah aktif pada suhu bilik