

SULIT



**LEMBAGA PEPERIKSAAN
KEMENTERIAN PENDIDIKAN MALAYSIA**

SIJIL PELAJARAN MALAYSIA 2014

4551/1

BIOLOGY

Kertas 1

Nov./Dis.

1 $\frac{1}{4}$ jam

Satu jam lima belas minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

- 1. Kertas soalan ini adalah dalam dwibahasa.*
- 2. Soalan dalam bahasa Inggeris mendahului soalan yang sepadan dalam bahasa Melayu.*
- 3. Calon dikehendaki membaca maklumat di halaman belakang kertas soalan ini.*

Kertas soalan ini mengandungi 37 halaman bercetak dan 3 halaman tidak bercetak.

[Lihat halaman sebelah

SULIT

4551/1 © 2014 Hak Cipta Kerajaan Malaysia



- 1 The following statements are the characteristics of an organelle in a cell.

Pernyataan berikut adalah ciri-ciri satu organel di dalam sel.

A pair of small cylindrical structures of microtubules and found only in animal cells

Sepasang struktur silinder kecil terdiri daripada mikrotubul dan terdapat dalam sel-sel haiwan sahaja

Which organelle has the above characteristics?

Organel manakah mempunyai ciri-ciri di atas?

- A Golgi apparatus

Jasad Golgi

- B Chloroplast

Kloroplas

- C Lysosome

Lisosom

- D Centriole

Sentriol

- 2 An individual suffers from ulcer in the ileum. A part of his ileum has been removed.

What is the effect to the product of starch digestion?

Seorang individu menghidap ulser di dalam ileum. Sebahagian daripada ileumnya perlu dibuang.

Apakah kesan ke atas hasil pencernaan kanji?

- A The amount of glucose increases

Kuantiti glukosa meningkat

- B The amount of starch increases

Kuantiti kanji meningkat

- C The amount of maltose increases

Kuantiti maltosa meningkat

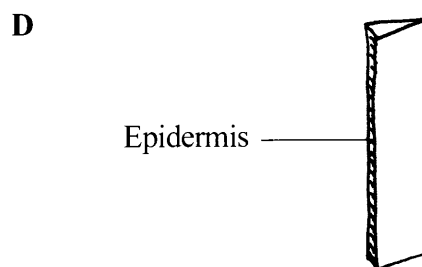
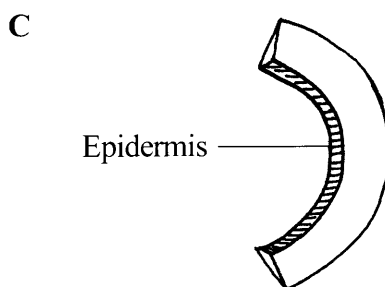
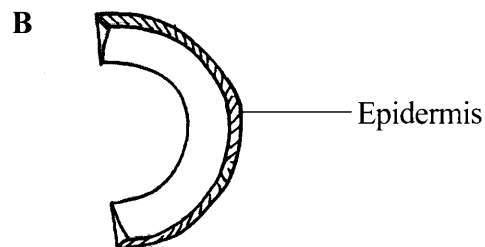
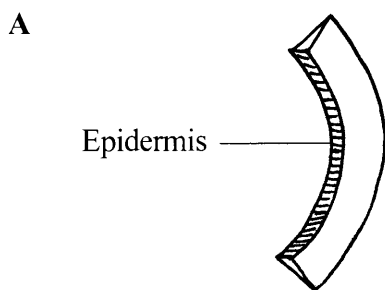
- D The amount of sucrose increases

Kuantiti sukrosa meningkat

- 3 Which process is involved in the movement of water molecules from soil into the root hairs of a plant?

Proses manakah yang terlibat dalam pergerakan molekul air dari tanah ke dalam akar rambut tumbuhan?

- A Facilitated diffusion
Resapan berbantu
- B Simple diffusion
Resapan ringkas
- C Active transport
Pengangkutan aktif
- D Osmosis
Osmosis
- 4 A slice of mustard green stem was immersed in 30% of sucrose solution. Which observation is correct after one hour?
- Sepotong batang sawi hijau telah direndam di dalam larutan sukrosa 30%. Pemerhatian yang manakah betul selepas satu jam?*



5 Which is an inorganic compound?

Manakah sebatian bukan organik?

A Rice

Nasi

B Fish

Ikan

C Water

Air

D Butter

Mentega

6 Which of the following is true about the enzyme reaction at 45 °C?

Antara yang berikut, yang manakah benar tentang tindak balas enzim pada suhu 45 °C?

A Reaction increases

Tindak balas meningkat

B Reaction decreases

Tindak balas menurun

C Reaction at maximum

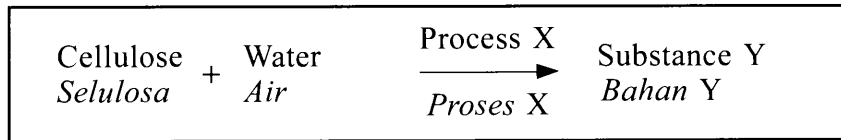
Tindak balas maksimum

D Reaction remains the same

Tindak balas kekal sama

- 7 The following equation shows digestion in a herbivor.

Persamaan berikut menunjukkan pencernaan dalam herbivor.



What are X and Y?

Apakah X dan Y?

	X	Y
A	Hydrolysis <i>Hidrolisis</i>	Galactose <i>Galaktosa</i>
B	Hydrolysis <i>Hidrolisis</i>	Glucose <i>Glukosa</i>
C	Condensation <i>Kondensasi</i>	Glucose <i>Glukosa</i>
D	Condensation <i>Kondensasi</i>	Galactose <i>Galaktosa</i>

- 8 Which food contains saturated fats?

Makanan manakah yang mengandungi lemak tepu?

- A** Butter
Mentega
- B** Corn oil
Minyak jagung
- C** Margerine
Marjerin
- D** Coconut oil
Minyak kelapa

- 9 Diagram 1 shows organelle X with attached ribosomes.

Rajah 1 menunjukkan organel X dengan ribosom yang melekat padanya.

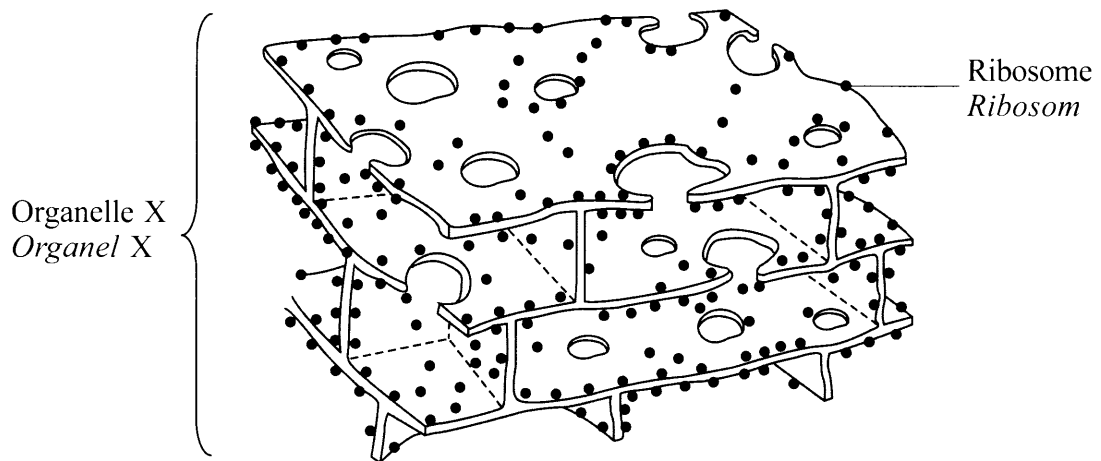


Diagram 1
Rajah 1

What happens if organelle X is damaged?

Apakah yang berlaku jika organel X rosak?

- A Protein will be denatured
Protein akan ternyahasli
- B Protein changes its active site
Protein menukar tapak aktifnya
- C Protein cannot be synthesised
Protein tidak dapat disintesis
- D Protein cannot be transported
Protein tidak dapat diangkut

- 10 Which of the following helps enzyme to function well?

Antara yang berikut, yang manakah membantu enzim berfungsi dengan baik?

- A Product
Hasil
- B Cofactor
Kofaktor
- C Inhibitor
Perencat
- D Substrate
Substrat

11 Diagram 2 shows a phase of mitosis in a cell.

Rajah 2 menunjukkan satu fasa mitosis di dalam sel.

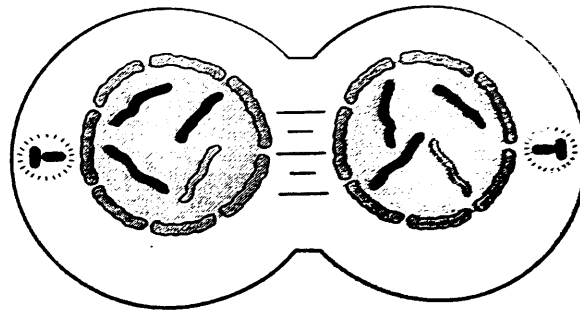


Diagram 2
Rajah 2

What is the phase?

Apakah fasa itu?

- A Prophase
Profasa
- B Metaphase
Metafasa
- C Anaphase
Anafasa
- D Telophase
Telofasa

12 Diagram 3 shows the process of fertilisation in human.

Rajah 3 menunjukkan proses persenyawaan dalam manusia.

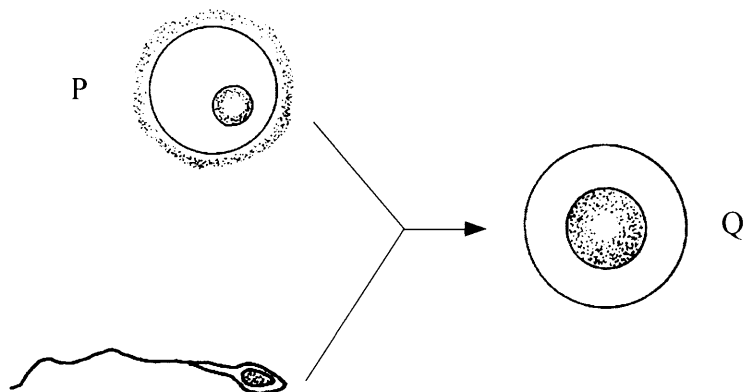


Diagram 3
Rajah 3

What is the number of chromosome in P and Q?

Apakah bilangan kromosom di P dan Q?

	P	Q
A	23	23
B	23	46
C	46	23
D	46	46

13 Diagram 4 shows metaphase I of meiosis in an animal cell.

Rajah 4 menunjukkan metafasa I bagi meiosis dalam suatu sel haiwan.

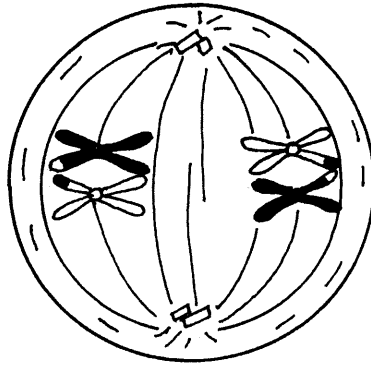


Diagram 4
Rajah 4

What is the number of chromosome in a gamete after the cell completes its division?

Apakah bilangan kromosom dalam gamet selepas sel membahagi dengan lengkap?

- A 2
- B 3
- C 4
- D 5

14 A farmer practises organic farming. He wants to increase the soil fertility.

Which method is the most suitable to improve the soil fertility?

Seorang petani mengamalkan pertanian organik. Dia mahu meningkatkan kesuburan tanah.

Kaedah manakah yang paling sesuai untuk meningkatkan kesuburan tanah itu?

- A Ploughing
Membajak
- B Crop rotation
Tanaman bergilir
- C Direct seeding
Tabur terus
- D Water drainage system
Sistem saliran air

- 15 The following information is about photosynthesis.

Maklumat berikut adalah mengenai fotosintesis.

Plants require water and carbon dioxide to produce starch in the presence of sunlight and chlorophyll.

Tumbuhan memerlukan air dan karbon dioksida untuk menghasilkan kanji dengan kehadiran cahaya matahari dan klorofil.

What will happen if the uptake of water is decreases?

Apakah akan berlaku sekiranya pengambilan air berkurangan?

- A Production of oxygen decreases
Penghasilan oksigen berkurang
- B Production of glucose increases
Penghasilan glukosa meningkat
- C The use of carbon dioxide increases
Penggunaan karbon dioksida bertambah
- D Concentration of hydrogen ions increases
Kepekatan ion-ion hidrogen bertambah

- 16 Which group of organisms obtains nutrients from dead organic matter?

Kumpulan organisma yang manakah mendapat nutrien daripada bahan-bahan organik yang mati?

- A Parasite
Parasit
- B Autotroph
Autotrof
- C Commensal
Komensal
- D Saprophyte
Saprofit

17 Diagram 5 shows a cross section of a leaf.

Rajah 5 menunjukkan keratan rentas bagi suatu daun.

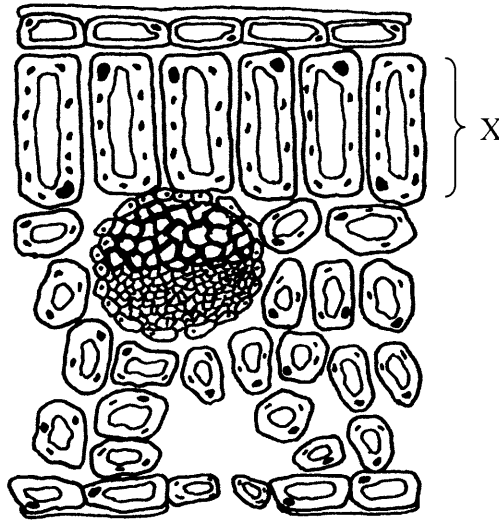


Diagram 5
Rajah 5

Why are cells X packed tightly together in an upright arrangement?

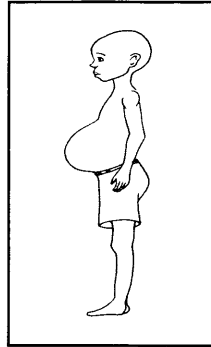
Mengapakah sel X tersusun bersama dengan rapat dalam kedudukan menegak?

- A** To receive maximum amount of light
Untuk menerima jumlah cahaya yang maksimum
- B** To receive maximum amount of water
Untuk menerima jumlah air yang maksimum
- C** To receive maximum amount of oxygen
Untuk menerima jumlah oksigen yang maksimum
- D** To receive maximum amount of carbon dioxide
Untuk menerima jumlah karbon dioksida yang maksimum

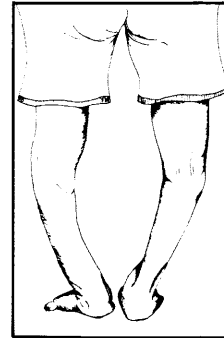
18 Which condition shows the effect of deficiency in vitamin C for a long period of time?

Keadaan manakah yang menunjukkan kesan kekurangan vitamin C untuk tempoh masa yang lama?

A



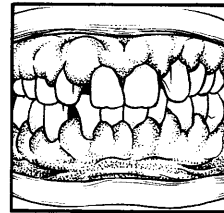
B



C



D



19 Diagram 6 shows levels of a food guide pyramid.

Rajah 6 menunjukkan aras bagi satu panduan piramid makanan.

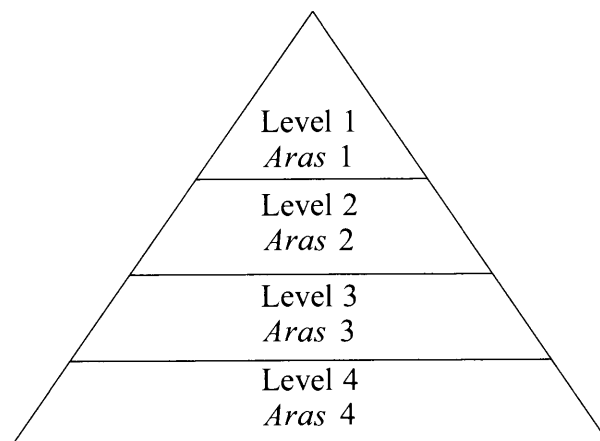


Diagram 6
Rajah 6

Food in which level should be taken less to avoid diabetes mellitus?

Makanan dalam aras manakah sepatutnya kurang diambil untuk mengelakkan diabetes mellitus?

- A** Level 1 and Level 2
Aras 1 dan Aras 2
- B** Level 1 and Level 4
Aras 1 dan Aras 4
- C** Level 2 and Level 3
Aras 2 dan Aras 3
- D** Level 2 and Level 4
Aras 2 dan Aras 4

20 Diagram 7 shows the digestive system of a ruminant.

Rajah 7 menunjukkan sistem pencernaan ruminan.

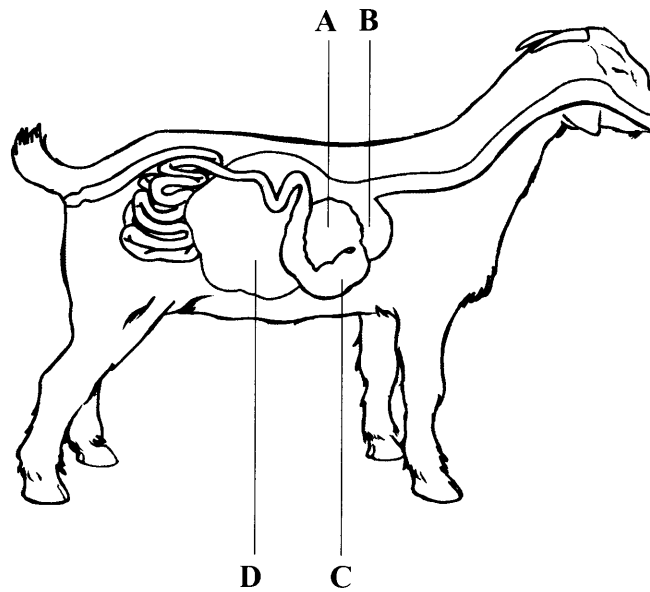


Diagram 7
Rajah 7

Which part labelled **A**, **B**, **C** or **D** is the abomasum?

*Antara bahagian berlabel **A**, **B**, **C** dan **D**, yang manakah abomasum?*

21 Which activity produces the highest concentration of lactic acid in the muscle?

Aktiviti manakah menghasilkan kepekatan asid laktik paling tinggi dalam otot?

A Walking

Berjalan

B Reading

Membaca

C Sprint running

Lari pecut

D Jogging

Berjoging

- 22 Diagram 8 shows an experiment to study respiration and photosynthesis, using two test tubes, X and Y.

Rajah 8 menunjukkan satu eksperimen untuk mengkaji respirasi dan fotosintesis, menggunakan dua tabung uji, tabung uji X dan tabung uji Y.

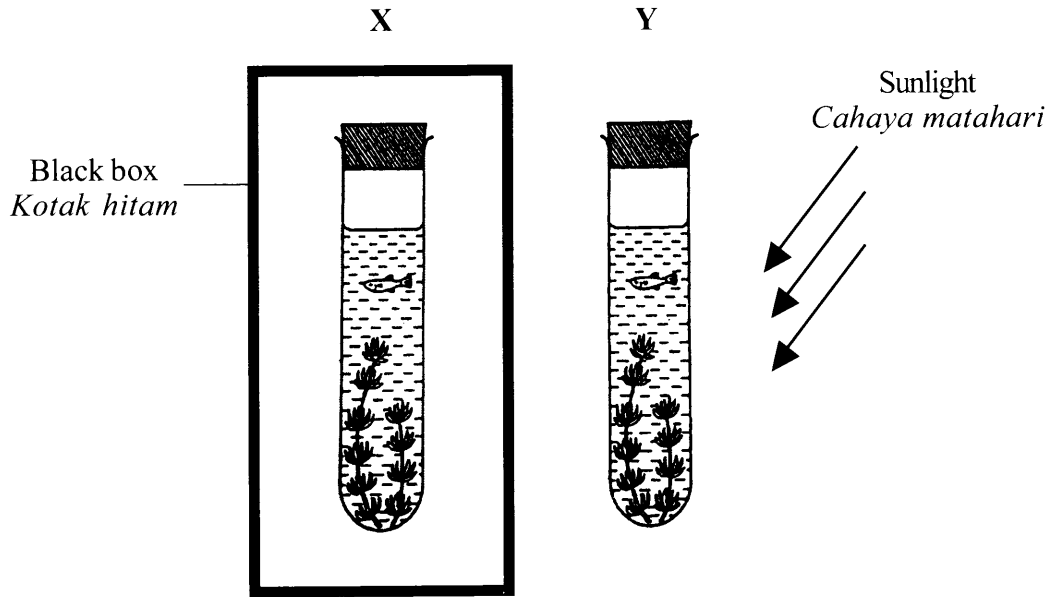


Diagram 8
Rajah 8

Which of the following are the result of the experiment after half an hour?

Antara yang berikut, yang manakah keputusan eksperimen selepas setengah jam?

	X	Y
A	High concentration of carbon dioxide <i>Kepekatan karbon dioksida tinggi</i>	High concentration of oxygen <i>Kepekatan oksigen tinggi</i>
B	High concentration of carbon dioxide <i>Kepekatan karbon dioksida tinggi</i>	Low concentration of oxygen <i>Kepekatan oksigen rendah</i>
C	Low concentration of carbon dioxide <i>Kepekatan karbon dioksida rendah</i>	High concentration of oxygen <i>Kepekatan oksigen tinggi</i>
D	Low concentration of carbon dioxide <i>Kepekatan karbon dioksida rendah</i>	Low concentration of oxygen <i>Kepekatan oksigen rendah</i>

[Lihat halaman sebelah
SULIT

23 Diagram 9 shows part of human respiratory organ.

Rajah 9 menunjukkan sebahagian daripada organ respirasi manusia.

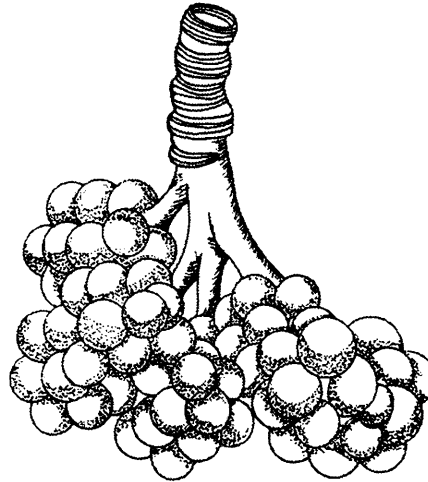


Diagram 9
Rajah 9

Which characteristic refers to the part shown in the diagram?

Ciri manakah merujuk kepada bahagian yang ditunjukkan dalam rajah itu?

A The respiratory surface is moist

Permukaan respirasi lembab

B The respiratory surface lining is thin

Lapisan permukaan respirasi adalah nipis

C The respiratory structure has a large surface area

Struktur respirasi mempunyai luas permukaan yang besar

D The respiratory structure is more permeable to oxygen

Struktur respirasi lebih telap kepada oksigen

24 What is the end product of anaerobic respiration in human?

Apakah produk akhir bagi respirasi anaerobik pada manusia?

A Water

Air

B 38 ATP

38 ATP

C Lactic acid

Asid laktik

D Carbon dioxide

Karbon dioksida

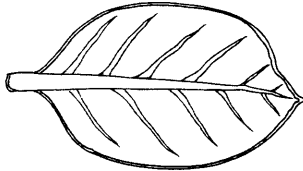
25 Mangrove plants act as a natural barrier that absorbs energy waves.

Which characteristics of the mangrove plants can help to reduce the damage to the coastal area?

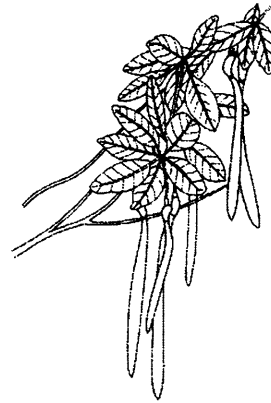
Pokok bakau bertindak sebagai penghalang semulajadi yang menyerap tenaga ombak.

Ciri-ciri pokok bakau manakah yang boleh membantu mengurangkan kerosakan di kawasan pantai?

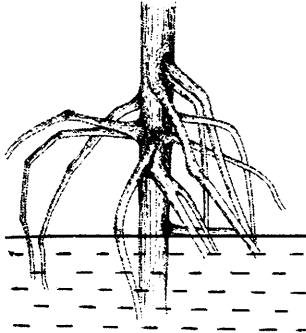
I



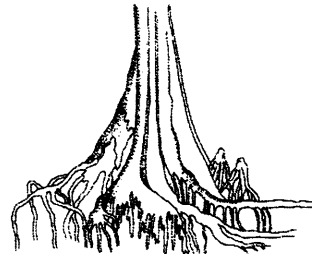
II



III



IV



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

26 Which is an abiotic component of an ecosystem?

Yang manakah komponen abiosis bagi suatu ekosistem?

A Bird

Burung

B Water

Air

C Fungus

Fungi

D Bacteria

Bakteria

- 27 A group of students carried out an experiment to estimate the density of *Mimosa pudica* in the school field using quadrats measuring 1m × 1m.

The density of *Mimosa pudica* is calculated using the following formula:

$$\text{Density} = \frac{\text{Total number of individuals of a species in all quadrats}}{\text{Number of quadrats} \times \text{quadrat area}}$$

Sekumpulan pelajar menjalankan satu eksperimen untuk menganggarkan kepadatan Mimosa pudica di padang sekolah menggunakan kuadrat berukuran 1m × 1m.

Kepadatan Mimosa pudica dihitung menggunakan formula berikut:

$$\text{Kepadatan} = \frac{\text{Jumlah bilangan individu bagi suatu spesies dalam semua kuadrat}}{\text{Bilangan kuadrat} \times \text{luas kuadrat}}$$

The result of the experiment is shown in Table 1.

Keputusan eksperimen ditunjukkan dalam Jadual 1.

Quadrat Kuadrat	1	2	3	4	5
Number of <i>Mimosa pudica</i> Bilangan <i>Mimosa pudica</i>	2	3	0	2	0

Table 1
Jadual 1

What is the estimated density of *Mimosa pudica* in the school field?

Apakah anggaran kepadatan Mimosa pudica di padang sekolah?

- A 0.7 m⁻²
- B 1.0 m⁻²
- C 1.4 m⁻²
- D 2.3 m⁻²

28 Which mechanism will occur if the pH value of the blood decreases?

Mekanisma manakah yang akan berlaku jika nilai pH darah menurun?

A Breathing and ventilation rate decrease

Kadar pernafasan dan ventilasi menurun

B Breathing and ventilation rate increase

Kadar pernafasan dan ventilasi meningkat

C Breathing rate increases but ventilation rate decreases

Kadar pernafasan meningkat tetapi kadar ventilasi menurun

D Breathing rate decreases but ventilation rate increases

Kadar pernafasan menurun tetapi kadar ventilasi meningkat

29 An experiment was carried out to investigate the level of water pollution in four water samples.

Which of the following is the most polluted water sample?

Satu eksperimen telah dijalankan untuk menyiasat tahap pencemaran air dalam empat sampel air.

Antara yang berikut, sampel air yang manakah paling tercemar?

	Water sample <i>Sampel air</i>	Time taken to decolourise methylene blue solution (min) <i>Masa yang diambil untuk melunturkan warna larutan metilena biru (min)</i>
A	S	10
B	T	30
C	U	50
D	V	120

30 The following information is about eutrophication.

Maklumat berikut adalah mengenai eutrofikasi.

Eutrophication is a condition that encourages algae to grow rapidly.

Eutrofikasi ialah keadaan yang menggalakkan pertumbuhan alga dengan pesat.

Which substance causes eutrophication?

Bahan yang manakah menyebabkan eutrofikasi?

A Lead

Plumbum

B Sediment

Enapan

C Phosphate

Fosfat

D Radioactive waste

Bahan buangan radioaktif

- 31 Diagram 10 is a graph which shows the effects of light intensity on the rate of transpiration in a plant.

Rajah 10 ialah graf yang menunjukkan kesan keamatan cahaya terhadap kadar transpirasi bagi suatu tumbuhan.

Rate of transpiration
Kadar transpirasi

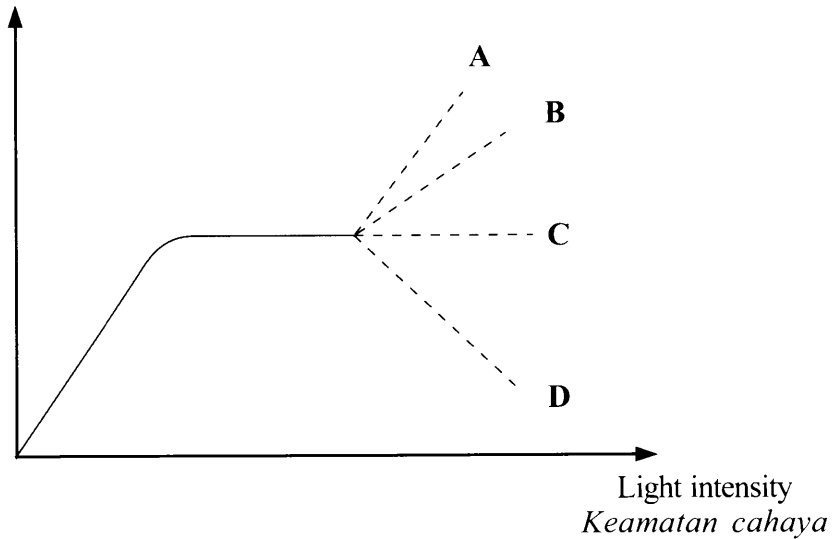


Diagram 10
Rajah 10

Which part of the graph labelled **A**, **B**, **C** or **D** shows the rate of transpiration after the leaves are removed?

*Bahagian manakah yang berlabel **A**, **B**, **C** dan **D** pada graf, menunjukkan kadar transpirasi selepas daun-daun dibuang?*

32 Diagram 11 shows part of human blood vessels.

Rajah 11 menunjukkan sebahagian daripada salur darah manusia.

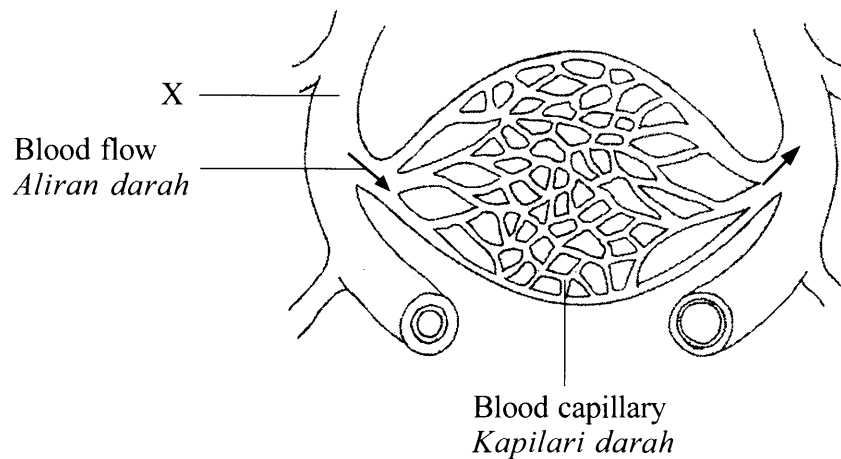


Diagram 11
Rajah 11

Which of the following is correct about X?

Antara yang berikut, yang manakah benar tentang X?

- A** The presence of valve
Kehadiran injap
- B** Thick muscular wall
Dinding otot tebal
- C** Transport deoxygenated blood
Mengangkut darah terdeoksigen
- D** Blood flows under lower pressure
Darah mengalir di bawah tekanan rendah

- 33 Diagram 12 is a graph which shows the concentration of antibodies during injection of antiserum.

Rajah 12 ialah graf yang menunjukkan kepekatan antibodi semasa suntikan antiserum.

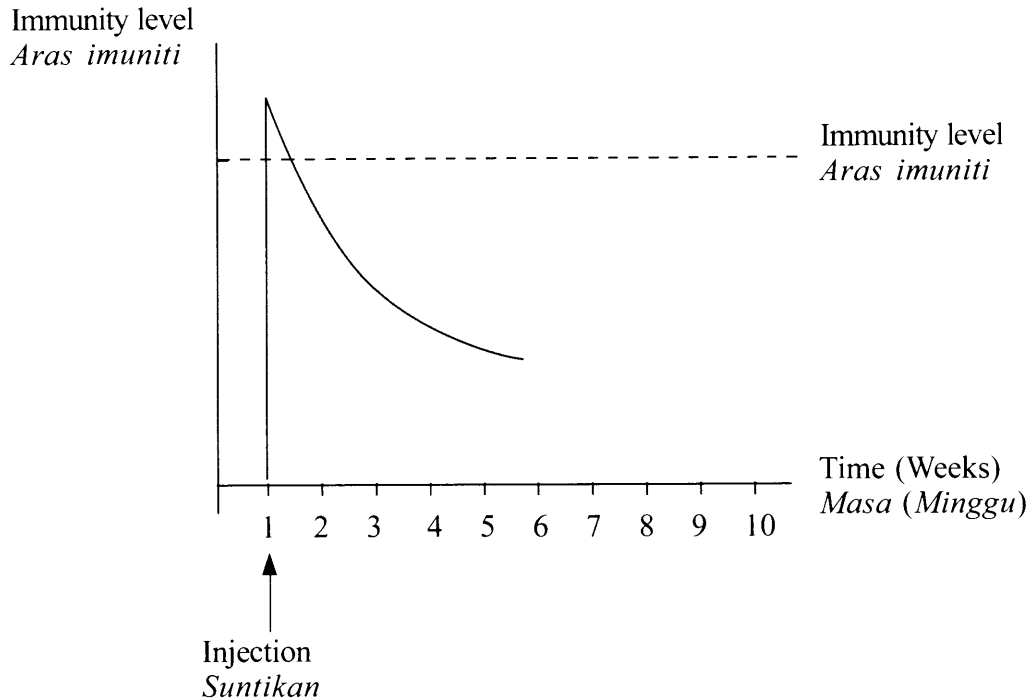


Diagram 12
Rajah 12

Which disease is related to the graph?

Penyakit manakah yang berkaitan dengan graf itu?

- A** Rabies
Penyakit anjing gila
- B** Meningitis
Meningitis
- C** Hepatitis B
Hepatitis B
- D** Poliomyelitis
Poliomieltis

34 Which ion involves in the opening and closing of stomata?

Ion manakah terlibat dalam pembukaan dan penutupan stomata?

A Sodium ion

Ion natrium

B Chloride ion

Ion klorida

C Calcium ion

Ion kalsium

D Potassium ion

Ion kalium

35 Which blood cells produce heparin?

Sel darah manakah menghasilkan heparin?

A Basophils

Basofil

B Neutrophils

Neutrofil

C Lymphocytes

Limfosit

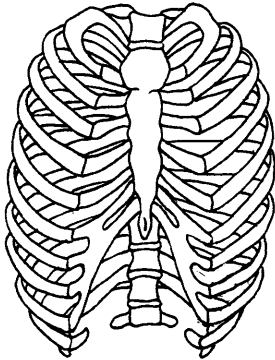
D Monocytes

Monosit

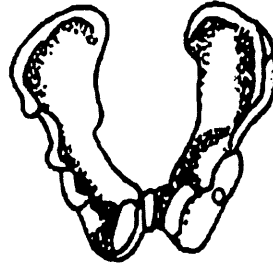
36 Which of the following is part of the human axial skeleton?

Antara berikut, yang manakah sebahagian daripada rangka paksi manusia?

A



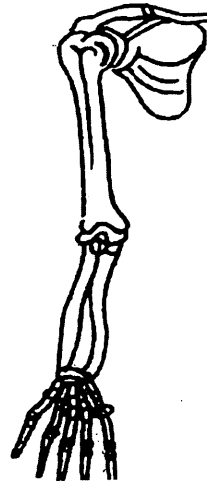
B



C



D



37 Diagram 13 shows human's forearm.

Rajah 13 menunjukkan lengan manusia.

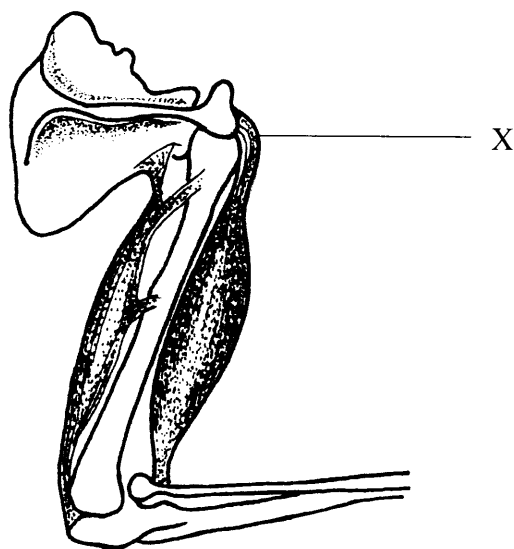


Diagram 13
Rajah 13

What is X?

Apakah X?

- A** Joint
Sendi
- B** Tendon
Tendon
- C** Muscle
Otot
- D** Ligament
Ligamen

- 38 Diagram 14 shows the response of skin in cold surrounding.
Rajah 14 menunjukkan gerak balas kulit dalam persekitaran yang sejuk.



Diagram 14
Rajah 14

What happens if structure X is shaved?

Apakah yang akan berlaku jika struktur X dicukur?

- A Erector muscle cannot contract
Otot erektor tidak boleh mengecut
- B Sweat gland becomes more active
Kelenjar peluh menjadi lebih aktif
- C More heat is lost to the environment
Lebih banyak haba hilang ke persekitaran
- D More blood is supplied to skin surface
Lebih banyak darah dibekalkan ke bawah permukaan kulit

39 Diagram 15 shows a germination of seed.

Rajah 15 menunjukkan percambahan biji benih.

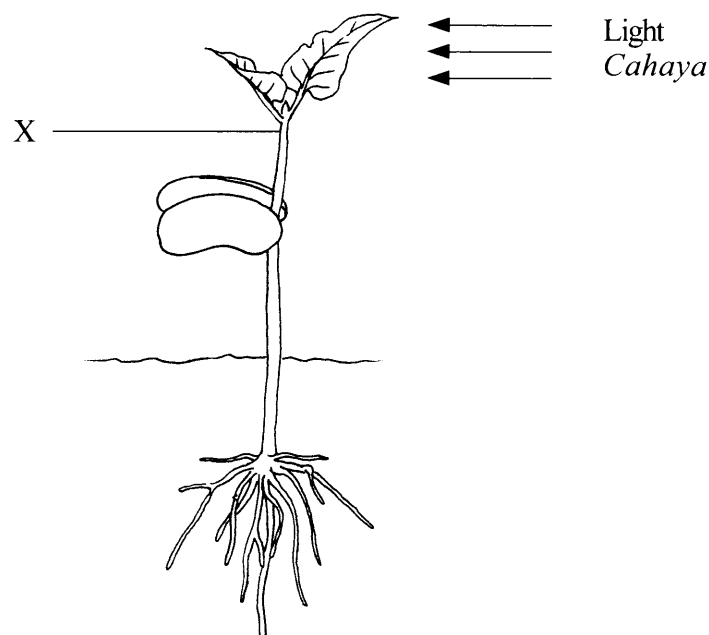


Diagram 15
Rajah 15

What happens to the concentration of auxin and direction of growth at X after being exposed to the light for a few days?

Apakah yang berlaku kepada kepekatan auksin dan arah pertumbuhan pada X selepas didedahkan kepada cahaya selama beberapa hari?

	Concentration of auxin <i>Kepekatan auksin</i>	Direction of growth <i>Arah pertumbuhan</i>
A	Low <i>Rendah</i>	Away from light <i>Menjauhi cahaya</i>
B	High <i>Tinggi</i>	Away from light <i>Menjauhi cahaya</i>
C	Low <i>Rendah</i>	Towards light <i>Ke arah cahaya</i>
D	High <i>Tinggi</i>	Towards light <i>Ke arah cahaya</i>

40 Diagram 16 shows a type of neurons.

Rajah 16 menunjukkan satu jenis neuron.

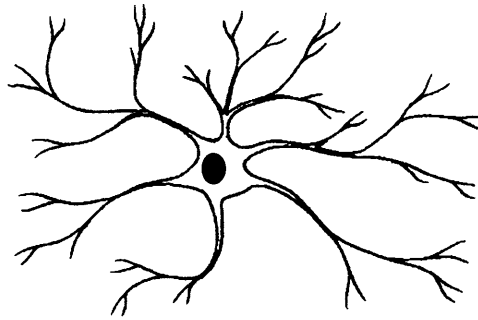


Diagram 16
Rajah 16

What is the type of this neurone?

Apakah jenis neuron ini?

A Afferent neurone

Neuron aferen

B Efferent neurone

Neuron eferen

C Interneurone

Neuron perantaraan

D Neurotransmitter

Neurotransmitter

41 The following are symptoms caused by lack of certain hormone in an adult.

Berikut adalah simptom-simptom yang disebabkan oleh kekurangan hormon tertentu pada seorang dewasa.

- Rate of heartbeat is low
Kadar denyutan jantung rendah
- Low metabolism
Metabolisma rendah
- Weight gain
Berat bertambah

Which hormone causes the symptoms?

Hormon manakah menyebabkan simptom-simptom tersebut?

A Insulin

Insulin

B Thyroxine

Tiroksina

C Adrenaline

Adrenalina

D Growth hormone

Hormon pertumbuhan

- 42 Diagram 17 shows the implantation of an embryo.
Rajah 17 menunjukkan penempelan embrio.

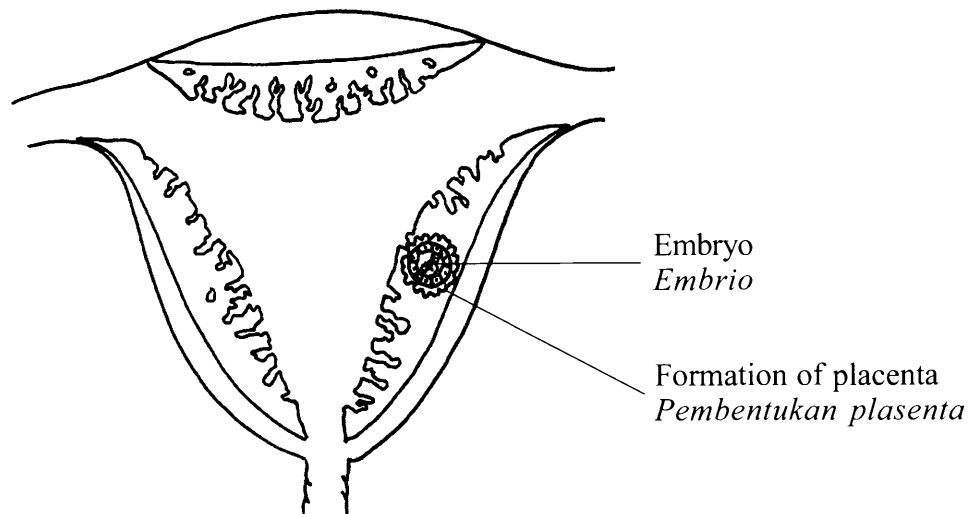


Diagram 17
Rajah 17

Misabortion of an embryo occurs due to lack of hormone secreted by the placenta.

Which treatment is most suitable to secure the implantation of the embryo?

Keguguran embrio berlaku disebabkan kekurangan hormon yang dirembeskan oleh plasenta.

Rawatan manakah yang paling sesuai untuk mengukuhkan penempelan embrio?

- A Injection of FSH
Suntikan FSH
- B Injection of GnRH
Suntikan GnRH
- C Injection of oestrogen
Suntikan estrogen
- D Injection of progesterone
Suntikan progesteron

- 43 Diagram 18 shows a seminiferous tubule.
Rajah 18 menunjukkan tubul seminiferus.

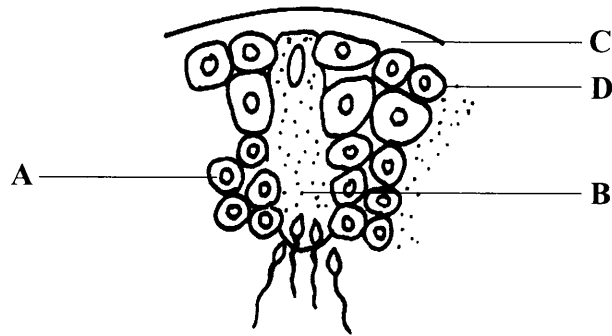


Diagram 18
Rajah 18

Which structure **A**, **B**, **C** or **D** provides nutrients for sperm cells?

Antara struktur A, B, C dan D, yang manakah menyediakan nutrien kepada sel sperma?

44

A woman released two secondary oocytes from the ovary during a menstrual cycle.
Seorang perempuan membebaskan dua oosit sekunder dari ovari semasa satu kitar haid.

What type of twins are most likely to be produced?

Apakah jenis kembar yang mungkin dihasilkan?

- A** Siamese twins
Kembar siam
- B** Identical twins
Kembar seiras
- C** Fraternal twins
Kembar tak seiras
- D** No formation of twins
Tiada pembentukan kembar

45 The following stages occur during spermatogenesis.

Peringkat-peringkat berikut berlaku semasa spermatogenesis.

P : Spermatid <i>Spermatid</i>
Q : Spermatogonium <i>Spermatogonium</i>
R : Secondary spermatocyte <i>Spermatosit sekunder</i>
S : Primary spermatocyte <i>Spermatosit primer</i>

Which sequence is correct?

Urutan manakah yang benar?

- A P → Q → R → S
- B S → R → Q → P
- C Q → S → R → P
- D Q → S → P → R

46 What is the basic unit of inheritance?

Apakah unit asas bagi pewarisan?

- A Genes
Gen
- B Trait
Trait
- C Character
Ciri
- D Chromosome
Kromosom

- 47 What type of gametes can be produced by a garden pea plant heterozygous (BbHh) for flower colour and flower position?

Apakah jenis gamet yang boleh dihasilkan oleh pokok kacang pea heterozigus (BbHh) untuk warna bunga dan kedudukan bunga?

- A** Bb and Hh
Bb *dan* Hh
- B** BH and bh
BH *dan* bh
- C** Bb, Hh, BH and bh
Bb, Hh, BH *dan* bh
- D** BH, Bh, bH and bh
BH, Bh, bH *dan* bh
- 48 What is the number of chromosomes in an individual with Turner's Syndrome?
Apakah bilangan kromosom bagi individu yang mempunyai Sindrom Turner?
- A** 45
- B** 46
- C** 47
- D** 48

- 49 Which of the following variations is caused by genetic factors only?
Antara variasi berikut, yang manakah disebabkan oleh faktor genetik sahaja?
- A Intelligence
Kepandaian
 - B Language
Bahasa
 - C Skin colour
Warna kulit
 - D Blood group
Kumpulan darah
- 50 Which characteristic represents continuous variation?
Ciri manakah mewakili variasi selanjar?
- A Height
Ketinggian
 - B Ability to roll tongue
Kebolehan menggulung lidah
 - C Pattern of fingerprints
Corak cap jari
 - D Type of blood group
Jenis kumpulan darah

END OF QUESTION PAPER
KERTAS SOALAN TAMAT

INFORMATION FOR CANDIDATES
MAKLUMAT UNTUK CALON

1. This question paper consists of **50** questions.
*Kertas soalan ini mengandungi **50** soalan.*
2. Answer **all** questions.
*Jawab **semua** soalan.*
3. Answer each question by blackening the correct space on the objective answer sheet.
Jawab dengan menghitamkan ruang yang betul pada kertas jawapan objektif.
4. Blacken only **one** space for each question.
*Hitamkan **satu** ruang sahaja bagi setiap soalan.*
5. If you wish to change your answer, erase the blackened mark that you have made. Then blacken the space for the new answer.
Sekiranya anda hendak menukar jawapan, padamkan tanda yang telah dibuat. Kemudian hitamkan jawapan yang baharu.
6. The diagrams in the questions provided are not drawn to scale unless stated.
Rajah yang mengiringi soalan tidak dilukis mengikut skala kecuali dinyatakan.
7. You may use a scientific calculator.
Anda dibenarkan menggunakan kalkulator saintifik.