

Answer **all** questions.

Jawab *semua* soalan.

- 1 Diagram 1 shows an animal cell.
Rajah 1 menunjukkan satu sel haiwan.

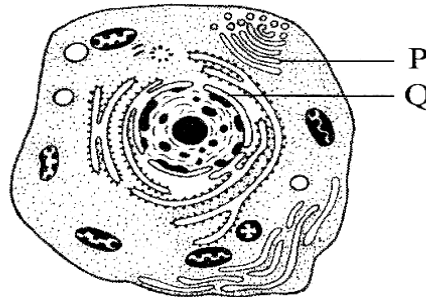


Diagram 1
Rajah 1

What is P and Q?

Apakah P dan Q?

	P	Q
A	Golgi body/ <i>Jasad Golgi</i>	Mitochondrion/ <i>Mitokondrion</i>
B	Golgi body/ <i>Jasad Golgi</i>	Nucleus/ <i>Nukleus</i>
C	Ribosome/ <i>Ribosom</i>	Nucleus/ <i>Nukleus</i>
D	Ribosome/ <i>Ribosom</i>	Mitochondrion/ <i>Mitokondrion</i>

- 2 The following informations refer to organelle X.
Maklumat berikut merujuk kepada organel X.

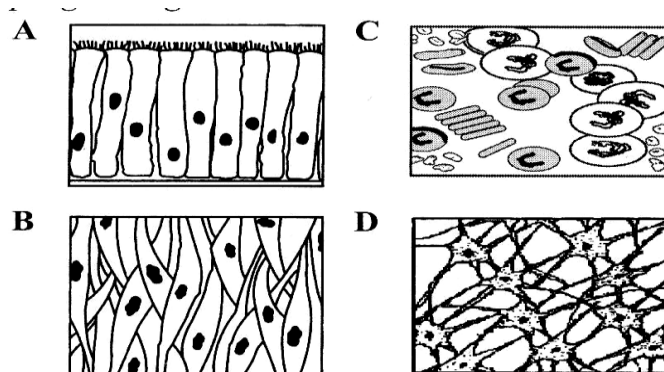
- | |
|---|
| <ul style="list-style-type: none"> • Contain hydrolytic enzyme.
<i>Mengandungi enzim hidrolitik.</i> • Digest organic complex molecules and eliminates the unused organelles.
<i>Mencernakan molekul organik kompleks dan menyingkirkan organel yang tidak digunakan lagi</i> |
|---|

What is organelle X?

Apakah organel X?

- | | |
|------------------------------|---|
| A Lysosome
<i>Lisosom</i> | C Golgi body
<i>Jasad Golgi</i> |
| B Ribosome
<i>Ribosom</i> | D Smooth endoplasmic reticulum
<i>Jalinan endoplasma licin</i> |

- 3 Which one is connective tissue?
Antara yang berikut, yang manakah tisu penghubung?



- 4 Diagram 2 shows an experiment to investigate the movement of substance across the visking tubing.
Rajah 2 menunjukkan satu eksperimen untuk mengkaji pergerakan bahan merentas tiub visking.

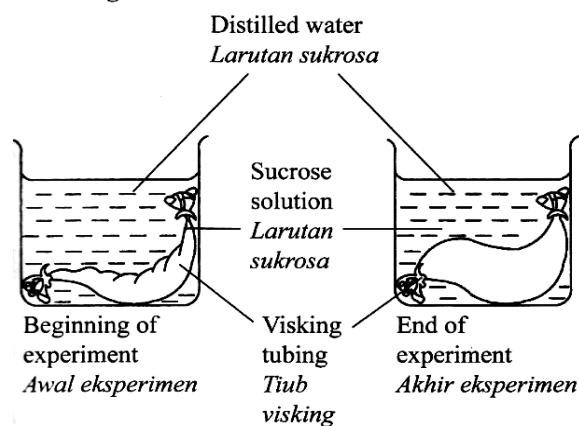


Diagram 2
Rajah 2

What is the process occur in diagram 2?
Apakah proses yang berlaku pada Rajah 2?

- | | | | |
|---|---|---|---|
| A | Osmosis
<i>Osmosis</i> | C | Facilitated diffusion
<i>Resapan berbantu</i> |
| B | Active transport
<i>Pengangkutan aktif</i> | D | Facilitated transport
<i>Pengangkutan berbantu</i> |

- 5 Diagram 3 shows the movement of X molecule across the plasma membrane through process of Y.
Rajah 3 menunjukkan pergerakan molekul X merentasi membran plasma melalui proses Y.

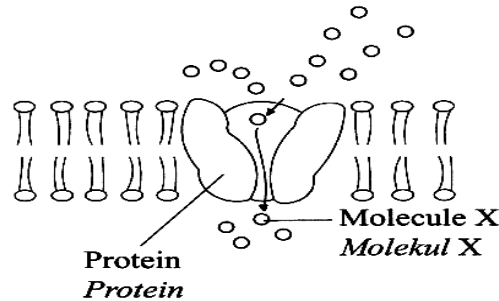


Diagram 3
Rajah 3

What is process of Y?
Apakah proses Y?

- | | | | |
|---|--|---|--|
| A | Osmosis
<i>Osmosis</i> | C | Active transport
<i>Pengangkutan aktif</i> |
| B | Simple diffusion
<i>Resapan ringkas</i> | D | Facilitated diffusion
<i>Resapan berbantu</i> |
- 6 The following detail explain a type of movement of molecules across the plasma membrane.
Maklumat berikut menerangkan sejenis pergerakan molekul-molekul merentasi membran plasma.

- The molecule move follows the concentration gradient with the aid of carrier protein and do not need energy.
Molekul bergerak mengikut kecerunan kepekatan dengan bantuan protein pembawa dan tidak memerlukan tenaga.

What is the type of movement?
Apakah jenis pergerakan ini?

- | | | | |
|---|---|---|--|
| A | Osmosis
<i>Osmosis</i> | C | Simple diffusion
<i>Resapan ringkas</i> |
| B | Active transport
<i>Pengangkutan aktif</i> | D | Facilitated diffusion
<i>Resapan berbantu</i> |

- 7 Diagram 4 shows a substrate and enzyme structure.
Rajah 4 menunjukkan struktur substrat dan enzim.

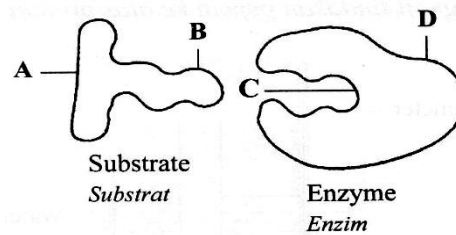


Diagram 4
Rajah 4

Which from A, B, C or D is active sites?
Antara A, B, C dan D yang manakah tapak aktif?

- 8 The graph shows a relationship between the rate of reaction and the concentration of substrate when a Y factor is change.
Rajah 5 ialah graf yang menunjukkan perhubungan antara kadar tindak balas dan kepekatan substrat apabila faktor Y diubah.

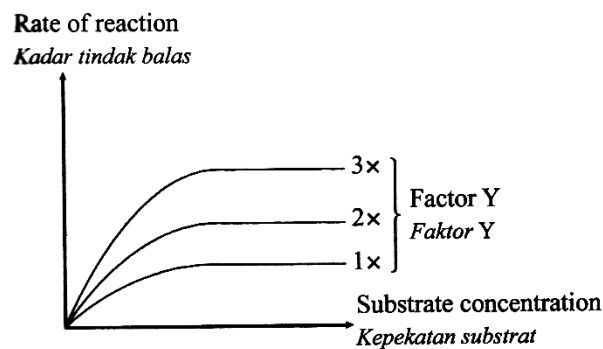


Diagram 5
Rajah 5

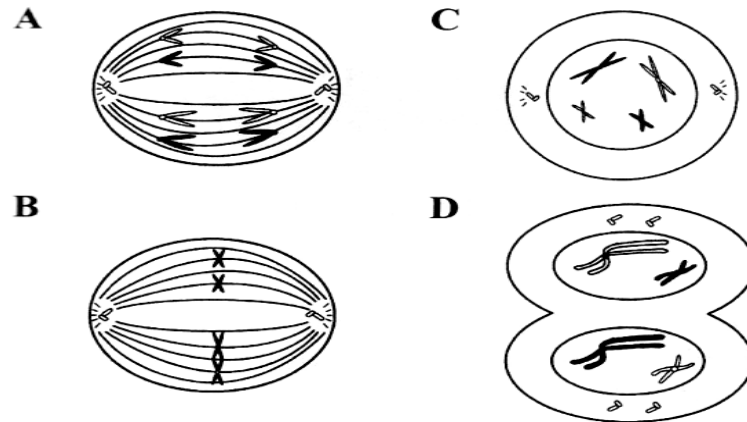
What is factor of Y?
Apakah faktor Y?

- | | | | |
|---|---------------------|---|--|
| A | pH
<i>pH</i> | C | Inhibitor
<i>Perencat</i> |
| B | Time
<i>Masa</i> | D | Enzyme concentration
<i>Kepekatan enzim</i> |

- 9 Hormone such as testosterone and oestrogen are lipids. What are the type of lipid in these hormone?
Hormon seperti testosteron dan estrogen adalah lipid. Apakah jenis lipid dalam hormon-hormon ini?

- | | | | |
|---|----------------------|---|-----------------------------------|
| A | Wax
<i>Lilin</i> | C | Steroid
<i>Steroid</i> |
| B | Fats
<i>Lemak</i> | D | Phospholipid
<i>Fosfolipid</i> |

- 10 Which of the following is **not true** about the stage in mitosis?
 Antara rajah berikut, yang manakah **tidak benar** tentang peringkat dalam mitosis?



- 11 Diagram 6 shows a process of P, Q, R and S occur during mitosis in cells.
 Rajah 6 menunjukkan proses P, Q, R dan S berlaku semasa mitosis di dalam sel.

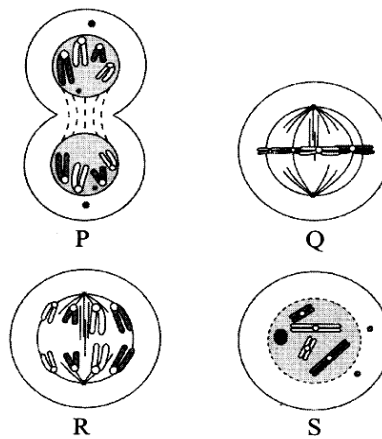


Diagram 6
 Rajah 6

- Which of the following shows the **correct** sequence for mitosis?
 Antara yang berikut, yang manakah menunjukkan urutan yang **betul** untuk mitosis?

- A P → Q → R → S C P → R → Q → S
 B S → Q → R → P D S → Q → P → R
- 12 What is the phase for synthesise and DNA replication?
 Apakah fasa untuk sintesis dan replikasi DNA?

- A G1 C G2
 B S D M

- 13 The number of diploid chromosomes for a cat is 38. If one pair of homologous chromosome does not separate during Meiosis 1, how many chromosomes can be found in a gamete?

Bilangan kromosom diploid bagi seekor kucing ialah 38. Jika satu daripada pasangan kromosom homolog tidak terpisah semasa Meiosis 1, berapakah bilangan kromosom yang mungkin didapati pada gamet?

- | | | | |
|---|----|---|----|
| A | 18 | C | 37 |
| B | 19 | D | 38 |

14. Diagram 7 shows a unicellular organism.

Rajah 7 menunjukkan satu organisma unisel.

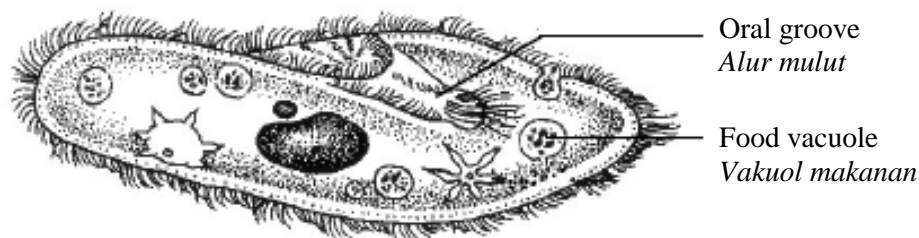


Diagram 7
Rajah 7

What type of nutrition is conducted by the organism?

Apakah jenis nutrisi yang dikendalikan oleh organisma ini?

- | | |
|---|---|
| A. Autotroph nutrition
<i>Nutrisi autotrof</i> | C. Parasitic nutrition
<i>Nutrisi parasit</i> |
| B. Holozoic nutrition
<i>Nutrisi holozoik</i> | D. Saprophytic nutrition
<i>Nutrisi saprofit</i> |

15. Which is the **correct** match of vitamin and its function?

Yang manakah padanan yang betul bagi vitamin dan fungsinya?

- | |
|---|
| A. Vitamin A – to prevent scurvy
<i>Vitamin A – untuk mencegah skurvi</i> |
| B. Vitamin C – to prevent pellagra
<i>Vitamin C – untuk mencegah pellagra</i> |
| C. Vitamin D – for formation of pigmen in the retina
<i>Vitamin D – untuk pembentukan pigmen dalam retina</i> |
| D. Vitamin B1 – for formation of coenzyme needed in cellular respiration
<i>Vitamin B1 – untuk pembentukan koenzim yang diperlukan dalam respirasi sel</i> |

16. Which of the following micronutrients are **needed** by plants?

Manakah antara yang berikut merupakan mikronutrien yang diperlukan oleh tumbuhan?

- | | |
|--|--|
| I. Copper
<i>Kuprum</i> | III. Manganese
<i>Mangan</i> |
| II. Zink
<i>Zink</i> | IV. Calcium
<i>Kalsium</i> |
| A. I and III only
<i>I dan III sahaja</i> | C. I, II and III only
<i>I, II dan III sahaja</i> |
| B. II and IV only
<i>II dan IV sahaja</i> | D. II, III and IV only
<i>II, III dan IV sahaja</i> |

17. Table 1 shows the content of protein, fat and carbohydrate in 10 grams of rice and fish.

Jadual 1 menunjukkan kandungan protein, lemak dan karbohidrat dalam 10 gram nasi dan ikan.

Nutrient (g) <i>Nutrien (g)</i>	Food <i>Makanan</i>	
	Rice <i>Nasi</i>	Fish <i>Ikan</i>
Protein <i>Protein</i>	0.6	1.6
Lipid <i>Lemak</i>	0.01	0.004
Carbohydrate <i>Karbohidrat</i>	8.7	0

Table 1
Jadual 1

What are the main digestive products from this meal?

Apakah hasil pencernaan utama daripada hidangan ini?

- A. Amino acids and glycerol
Asid amino dan gliserol
- B. Simple sugar and glycerol
Gula ringkas dan gliserol
- C. Fatty acids and simple sugar
Asid lemak dan gula ringkas
- D. Amino acids and simple sugar
Asid amino dan gula ringkas

18. Diagram 8 shows a part of human digestive system.

Rajah 8 menunjukkan sebahagian daripada sistem pencernaan manusia.

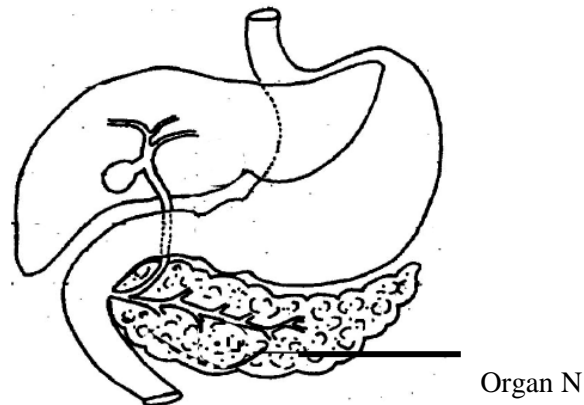


Diagram 8
Rajah 8

Which process will be affected when Organ N fails to function?

Proses manakah akan terjejas apabila Organ N gagal berfungsi?

- A. Digestion of sucrose
Pencernaan sukrosa
- B. Emulsification of lipids
Pengemulsian lipid.
- C. Secretion of pepsin enzyme
Perembesan enzim pepsin
- D. Conversion of glycogen to glucose
Penukaran glikogen kepada glukosa

19. Which structure is involved in the breathing mechanism of a frog?

Struktur manakah yang terlibat dalam mekanisma pernafasan seekor katak?

- A. Rib cage
Sangkar rusuk
- B. Diaphragm
Diafragma
- C. Intercostal muscle
Otot interkosta
- D. Bucco-pharyngeal cavity
Rongga mulut

20. Diagram 9 shows a respiratory structure of an organism.

Rajah 9 menunjukkan struktur pernafasan satu organisma.

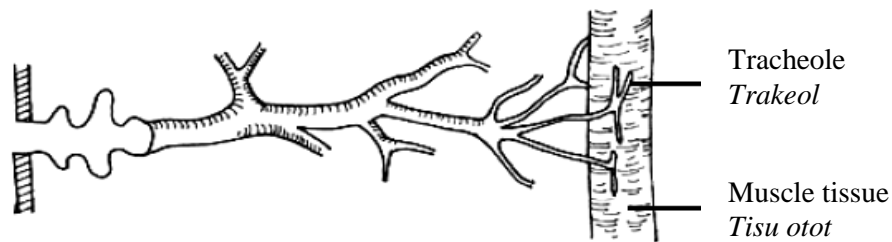


Diagram 9
Rajah 9

Which organism has this respiratory structure?

Organism yang manakah mempunyai struktur respirasi ini?

- | | |
|-----------------------------------|-------------------------|
| A. Grasshopper
<i>Belalang</i> | C. Fish
<i>Ikan</i> |
| B. Lizard
<i>Cicak</i> | D. Frog
<i>Katak</i> |

21. Diagram 10 shows the cells which are found in human respiratory system.

Rajah 10 menunjukkan beberapa sel yang didapati dalam sistem respirasi manusia.

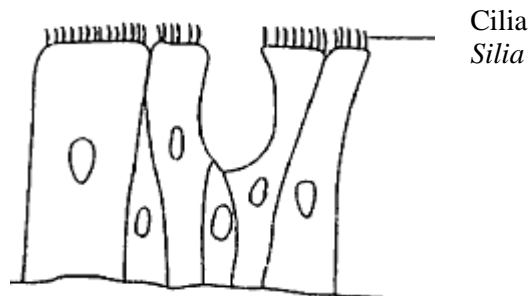


Diagram 10
Rajah 10

What is the function of cilia in these cells?

Apakah fungsi silia dalam sel-sel ini?

- To absorb oxygen into the cells.
Untuk menyerap oksigen ke dalam sel
- To produce mucus as to trap dust particles
Untuk menghasilkan mukus bagi memerangkap partikel habuk
- To increase surface area for gaseous exchange.
Untuk menambah luas permukaan bagi pertukaran gas.
- To sweep mucus along dust particles towards the pharynx.
Untuk menyapu mukus bersama partikel habuk ke arah faring.

22. Diagram 11 represent the exchange of gases in human respiratory system.
Rajah 11 mewakili pertukaran gas dalam sistem respirasi manusia.

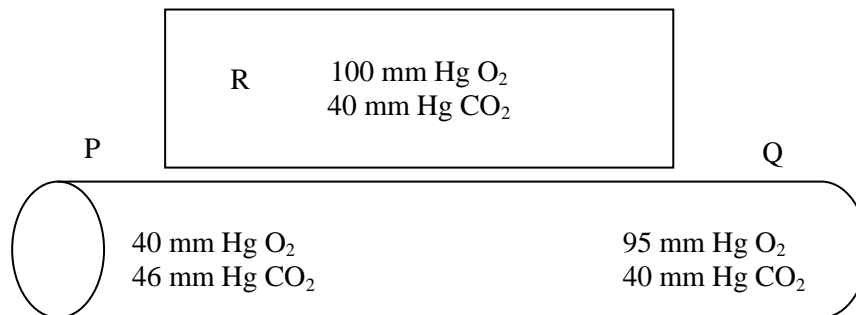
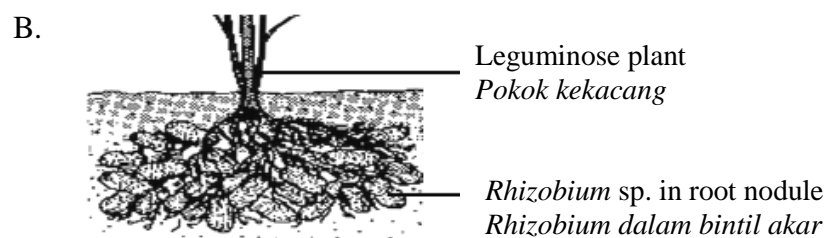
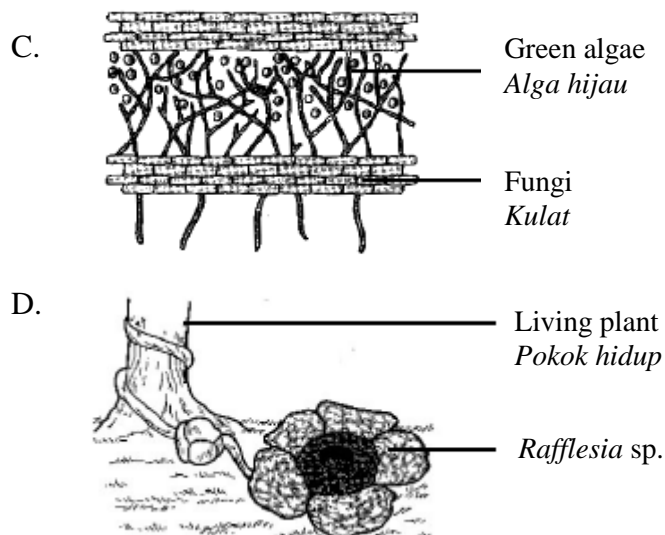


Diagram 11
Rajah 11

Which of the following **correctly** describe the diagram?
*Manakah antara berikut **benar** menghuraikan rajah tersebut?*

- A. R is a blood capillary and blood flows from P to Q
R ialah kapilari darah dan darah mengalir dari P ke Q
- B. R is a blood capillary and blood flows from Q to P
R ialah kapilari darah dan darah mengalir dari Q ke P.
- C. R is an alveolus and blood flows from P to Q
R ialah alveolus dan darah mengalir dari P ke Q
- D. R is an alveolus and blood flows from Q to P
R ialah alveolus dan darah mengalir dari Q ke P
23. Which of the following represents commensalism?
Yang manakah antara berikut mewakili komensalisme?





24. Diagram 12 shows **three** organisms which belong to different kingdoms.
Rajah 12 menunjukkan tiga organisma yang tergolong dalam alam berbeza.

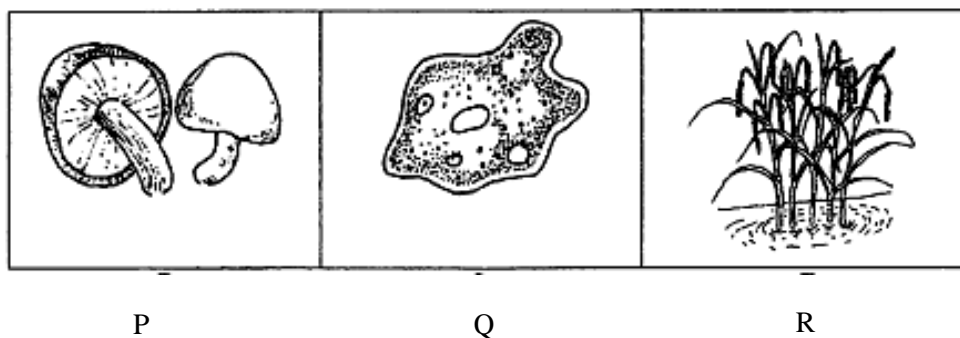


Diagram 12
Rajah 12

Which is the correct kingdom for P, Q and R?
Yang manakah alam yang betul untuk P, Q dan R?

	P	Q	R
A.	Protista	Fungi	Plantae
B.	Fungi	Protista	Plantae
C.	Fungi	Plantae	Protista
D.	Protista	Plantae	Fungi

27. Which of the following is the effect of eutrophication?
Manakah yang berikut adalah kesan daripada eutrofikasi?
- A A decrease in water pH
Penurunan pada pH air
 - B A decrease in water temperature
Penurunan pada suhu air
 - C A decrease in water level
Penurunan aras air
 - D A decrease in dissolved oxygen level
Penurunan aras oksigen terlarut
28. Diagram 14 shows an electrical device
Rajah 14 menunjukkan satu alat elektrik.



Diagram 14
Rajah 14

The device shown above uses a substance that acts as coolant. Which of the following is the effect of the substance to the environment?

Alat di atas menggunakan sejenis bahan sebagai penyejuk. Manakah antara berikut adalah kesan bahan tersebut kepada alam sekitar?

- A Greenhouse effect
Kesan rumah hijau
- B Flash flood
Banjir kilat
- C Thinning of the ozone layer
Penipisan lapisan ozon
- D Acid rain
Hujan asid

29. Diagram 15 shows the time taken to decolourise methylene blue solution to determine the BOD value in three water samples.

Rajah 15 menunjukkan masa yang diambil untuk menyahwarna larutan metilena biru untuk menentukan nilai BOD dalam tiga sampel air.

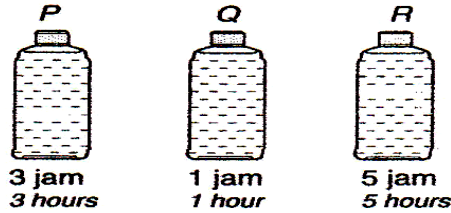


Diagram 15

Rajah 15

Which the following might be the source of water samples P, Q and R?

Antara yang berikut, manakah kemungkinan sumber bagi sampel air P, Q dan R?

	P	Q	R
A	Drain <i>Longkang</i>	Pond <i>Kolam</i>	Tap <i>Pili</i>
B	Drain <i>Longkang</i>	Tap <i>Pili</i>	Pond <i>Kolam</i>
C	Pond <i>Kolam</i>	Drain <i>Longkang</i>	Tap <i>Pili</i>
D	Pond <i>Kolam</i>	Tap <i>Pili</i>	Drain <i>Longkang</i>

30. Diagram 16 shows a cross-section of an organ.

Rajah 16 menunjukkan keratan rentas satu organ.

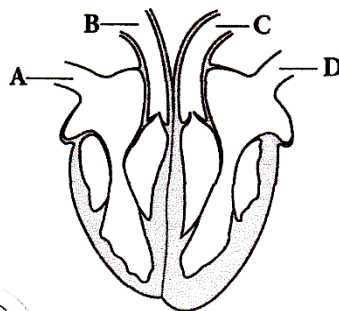


Diagram 16

Rajah 16

Which of the blood vessels labelled A, B, C or D transport deoxygenated blood to the heart?

Manakah antara salur darah berlabel A, B, C atau D membawa darah terdeoksigen ke jantung?

31. The schematic diagram below shows the mechanism blood clotting in human.
Gambarajah skema di bawah menunjukkan mekanisme pembekuan darah manusia.

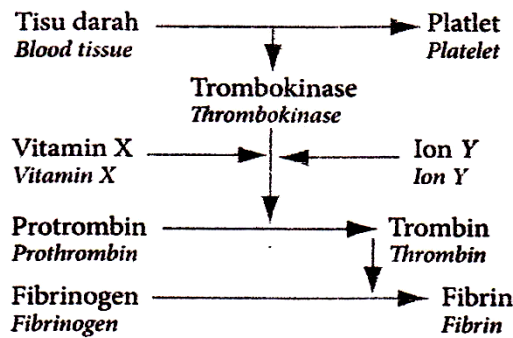


Diagram 17
Rajah 17

What are vitamin X and ion Y?
Apakah vitamin X dan ion Y?

	Vitamin X	Ion Y
A	D	Iron / <i>Besi</i>
B	D	Calcium / <i>Kalsium</i>
C	K	Sodium / <i>Natrium</i>
D	K	Calcium / <i>Kalsium</i>

32. Why is transpiration important to land plants?
Mengapakah transpirasi penting untuk tumbuhan darat?

- I Helps transport water to the leaves
Membantu mengangkut air ke daun
- II Helps transport organic food substances
Membantu mengangkut bahan makanan organik
- III Helps transport mineral salts
Membantu mengangkut garam mineral
- IV Helps cool the plant
Membantu menyejukkan tumbuhan

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

33. What happens if excess interstitial fluid is unable to return to the circulatory system?
Apakah yang terjadi jika bendalir tisu berlebihan tidak dapat kembali ke sistem peredaran?
- A The fluid stays in the tissues and causes swelling
Bendalir kekal dalam tisu dan menyebabkan bengkakan
 - B The fluid is excreted through the skin as sweat
Bendalir dirembeskan melalui kulit sebagai peluh
 - C The fluid is passed out of the body as urine
Bendalir dikeluarkan dari badan sebagai air kencing
 - D The fluid drains back into the lymphatic system
Bendalir mengalir kembali ke dalam sistem limfa
34. Diagram 18 shows the skeleton and muscles of a bird.
Rajah 18 menunjukkan rangka dan otot seekor burung.

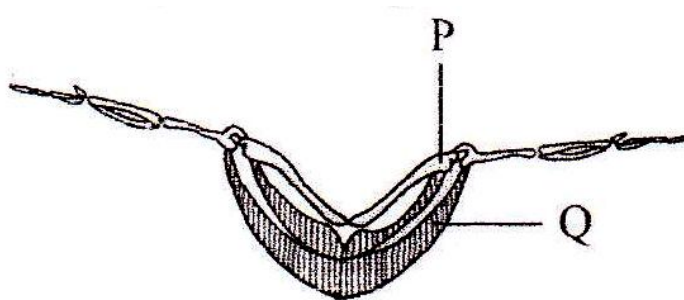


Diagram 18
Rajah 18

What are P and Q?
Apakah P dan Q?

	P	Q
A	Pectoralis minor <i>Pektoral minor</i>	Sternum <i>Sternum</i>
B	Humerus <i>Humerus</i>	Pectoralis minor <i>Pektoral minor</i>
C	Pectoralis major <i>Pektoral major</i>	Humerus <i>Humerus</i>
D	Sternum <i>Sternum</i>	Pectoralis major <i>Pektoral major</i>



35. Which of two bones form a hinge joint?
Antara berikut, manakah antara dua tulang yang membentuk sendi engsel?

- | | |
|---|---|
| A Humerus and Ulna
<i>Humerus dan ulna</i> | C Humerus and radius
<i>Humerus dan radius</i> |
| B Radius and ulna
<i>Radius dan ulna</i> | D Scapula and humerus
<i>Skapula dan humerus</i> |

36. Diagram 19 shows the clavicle, scapula and humerus in human.
Rajah 19 menunjukkan tulang klavikel, skapula dan humerus pada manusia.

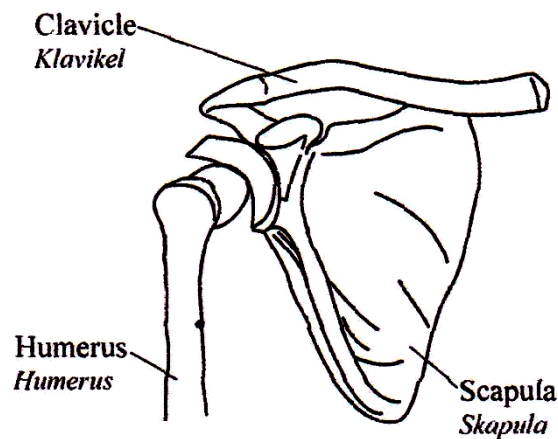


Diagram 19
Rajah 19

Which of the following will cause pain if the clavicle breaks?
Antara berikut, yang manakah akan menyebabkan kesakitan jika tulang klavikel patah?

- | | |
|---|---|
| I Inhalation
<i>Menarik nafas</i> | |
| II Turning the head
<i>Memusingkan kepala</i> | |
| III Bending the arm
<i>Membengkokkan tangan</i> | |
| IV Clenching the fist
<i>Menggenggam jari tangan</i> | |
| A 1 and II only
<i>I dan II sahaja</i> | C I and IV only
<i>1 dan IV sahaja</i> |

- B II and III only
II dan III sahaja
- D III and IV only
III dan IV sahaja

37. Diagram 20 shows a synapse.
Rajah menunjukkan satu sinaps.

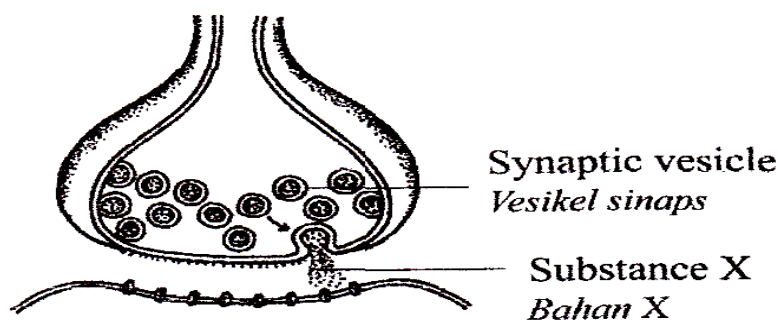


Diagram 20
Rajah 20

What is substance X?
Apakah bahan X?

- A Enzyme
Enzim
- C Antibody
Antibodi
- B Hormone
Hormon
- D Neurotransmitter
Neurotransmitter
38. A man had an accident. The accident caused injury to the brain and affects his reading ability. Which part of the brain is affected?
Seorang lelaki mengalami kemalangan. Kemalangan itu menyebabkan kecederaan pada otak dan menjejaskan kebolehannya membaca. Bahagian otak manakah yang terjejas?
- A Cerebrum
Serebrum
- C. Cerebellum
Serebelum
- B Hypothalamus
Hipotalamus
- D Medulla oblongata
Medula oblongata
39. How our bodies are able to maintain a constant temperature in winter season?
Bagaimanakah badan kita boleh mengekalkan suhu yang tetap pada musim sejuk?
- A Increasing our metabolic rate
Meningkatkan kadar metabolisma
- B Increasing the flow of blood to the skin
Meningkatkan aliran darah ke kulit
- C. Increasing the rate of secretion of sebum at the surface of the skin

Meningkatkan kadar rembesan sebum dipermukaan kulit

- D. Increasing the rate of ADH secretion
Meningkatkan kadar rembesan ADH

40. A patient with kidney failure uses a haemodialysis machine to eliminate urea from his blood.

Seorang pesakit yang mengalami kegagalan ginjal menggunakan mesin hemodialisis untuk menyingkirkan urea daripada darahnya.

Which of the following statements explains the situation?

Antara pernyataan berikut yang manakah menerangkan situasi tersebut?

- A Concentration of urea in the dialysis fluid is higher than in the blood
Kepekatan urea dalam cecair dialisis lebih tinggi daripada kepekatan urea dalam darah
- B Concentration of urea in the blood is higher than in the dialysis
Kepekatan urea dalam darah lebih tinggi daripada kepekatan urea dalam cecair dialisis
- C Concentration of urea in the blood and in the dialysis fluid is the same
Kepekatan urea dalam darah adalah sama dengan kepekatan urea dalam cecair dialisis
- D Concentration of water molecules in the blood is higher than in the dialysis fluid
Kepekatan molekul air dalam darah lebih tinggi daripada kepekatan molekul cecair dialisis

41. Diagram 21 shows a cross- section of a dicotyledonous root.

Rajah 21 menunjukkan keratan rentas akar dikotiledon.

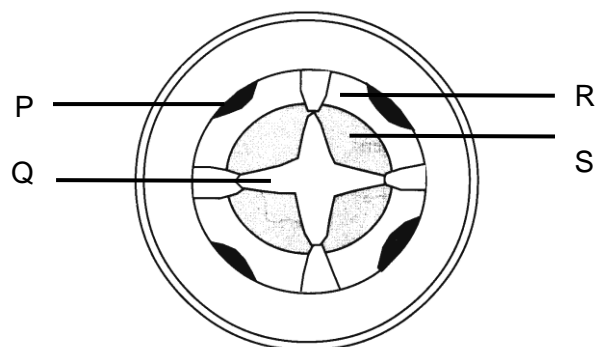


Diagram 21

Rajah 21

Which part labelled as P, Q, R and S is **correct**

Bahagian berlabel P, Q, R dan S manakah adalah betul.

	P	Q	R	S
A	Secondary xylem <i>Xilem sekunder</i>	Primary phloem <i>Floem primer</i>	Secondary phloem <i>Floem sekunder</i>	Primary xylem <i>Xilem primer</i>
B	Primary phloem <i>Floem primer</i>	Secondary phloem <i>Floem sekunder</i>	Secondary xylem <i>Xilem sekunder</i>	Primary xylem <i>Xilem primer</i>
C	Secondary xylem <i>Xilem sekunder</i>	Secondary phloem <i>Floem sekunder</i>	Primary xylem <i>Xilem primer</i>	Primary phloem <i>Floem primer</i>
D	Primary phloem <i>Floem primer</i>	Primary xylem <i>Xilem primer</i>	Secondary phloem <i>Floem sekunder</i>	Secondary xylem <i>Xilem sekunder</i>

42. Which of the following statement is **correct** about fraternal twin?

Antara pernyataan berikut, yang manakah betul tentang kembar tak seiras?

- A Fertilisation between two sperms and two ovum developed into two zygotes and has its own placenta
Persenyawaan antara dua sperma dan dua ovum berkembang menjadi dua zygot dan mempunyai dua plasenta sendiri
- B Fertilisation between two sperms and two ovum developed into two zygotes and share one placenta
Persenyawaan antara dua sperma dan dua ovum berkembang menjadi dua zygot dan berkongsi satu plasenta
- C Fertilisation between one sperm and one ovum developed into one zygote and the zygote is divided into two.
Persenyawaan antara satu sperma dan satu ovum berkembang menjadi satu zygot dan zygot membahagi kepada dua
- D Fertilisation between one sperm and two ovum developed into two zygotes
Persenyawaan antara satu sperma dan dua ovum berkembang menjadi dua zygot

43. Diagram 22 shows the stage in the development of follicle in the ovary of human where R develop into S.

Rajah 22 menunjukkan peringkat perkembangan folikel di dalam ovari manusia di mana R berkembang menjadi S.

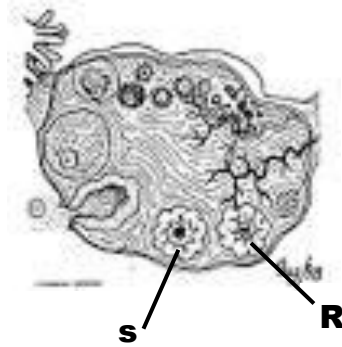


Diagram 22
Rajah 22

Which of the following are the changes of the hormonal levels in the blood during the development of the follicle?

Antara berikut yang manakah perubahan aras hormon di dalam darah semasa perkembangan folikel itu?

	Progesterone <i>Progesteron</i>	Follicle Stimulating Hormone <i>Hormon Perangsang Folikel</i>
A	Increase <i>Meningkat</i>	Increase <i>Meningkat</i>
B	Decreases <i>Menurun</i>	Increase <i>Meningkat</i>
C	Increases <i>Meningkat</i>	Decreases <i>Menurun</i>
D	Decreases <i>Menurun</i>	Decreases <i>Menurun</i>

44. A rounded yellow seed homozygous pea is crossed with a wrinkled green seed. Rounded seed is dominant to wrinkled seed while yellow seed is dominant to green seed. A progeny from the first generation (F1) is crossed with another plant which is homozygous recessive for both traits. What is the phenotypic ratio of the second generation (F2)?

Satu biji benih kacang pea berwarna kuning dan bulat dikacukkan dengan satu biji benih berwarna hijau dan berkedut. Biji bulat adalah dominan terhadap biji berkedut manakala biji berwarna kuning adalah dominant terhadap warna hijau. Anak pada generasi filial pertama dikacukkan dengan pokok lain yang homozigot resesif terhadap

kedua-dua trait. Apakah nisbah fenotip pada generasi filial kedua (F2)?

- A All round yellow seed
Semua biji bulat berwarna kuning
- B 3 round yellow : 1 wrinkle green
3 biji bulat berwarna kuning: 1 berkedut berwarna hijau
- C 9 round yellow: 3 round green : 3 wrinkle yellow: 1 wrinkle green
9 bulat kuning : 3 bulat hijau : 3 berkedut kuning: 1 berkedut hijau
- D 1 round yellow: 1 round green: 1 wrinkle yellow: 1 wrinkle green
1 bulat kuning: 1 bulat hijau : 1 berkedut kuning: 1 berkedut hijau

45. Diagram 23 shows the karyotype of an individual.

Rajah 23 menunjukkan kariotip seorang individu

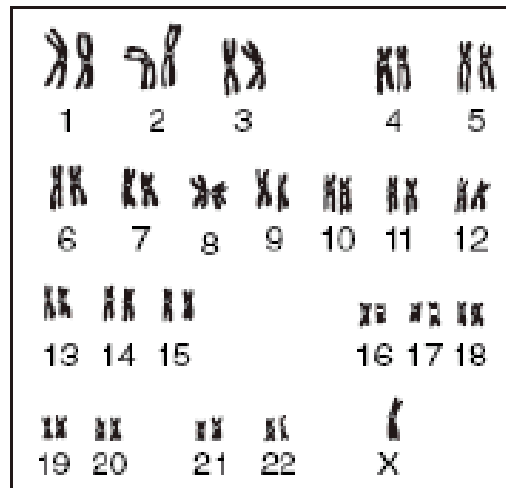


Diagram 23

Rajah 23

What is the effect of the above karyotype to that person?

Apakah kesan kariotip di atas terhadap seorang individu tersebut?

- A Male with Klinefelter's syndrome
Lelaki mengalami sindrom Klinefelter
- B Female with Klinefelter's syndrome
Perempuan mengalami sindrom Klinefelter
- C Male with Turner's syndrome
Lelaki mengalami sindrom Turner
- D Female with Turner's syndrome
Perempuan mengalami sindrom Turner

46. Diagram 24 shows the inheritance of albinism within a family. **A** are dominant alleles while **a** are recessive alleles.

Rajah 24 menunjukkan pewarisan sifat albinisma di dalam keluarga. A adalah alel dominan manakala a adalah alel resesif

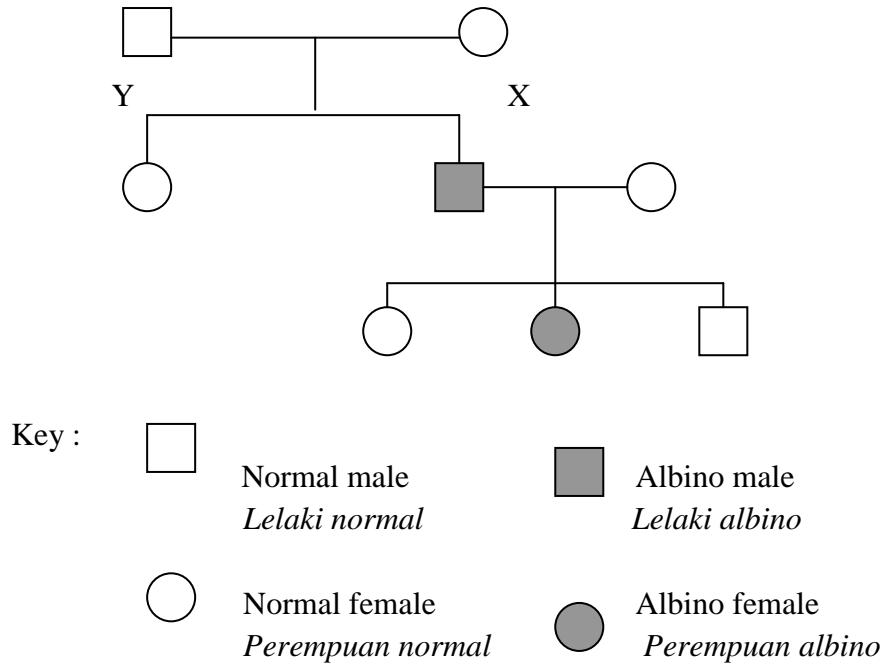


Diagram 24
Rajah 24

What are the genotypes for X and Y?

Apakah genotip X dan Y?

	X	Y
A	AA	AA
B	Aa	Aa
C	AA	aa
D	Aa	aa

47. A woman has a second child who suffers from Erythroblastosis fetalis during the fetal stage. What are the possible genotypes of the parents? (Rh = allele for Rhesus factors)
Seorang wanita mendapat anak kedua yang mengalami Eritrobastolisis fetalis semasa peringkat fetus. Apakah kemungkinan genotip bagi pasangan tersebut? (Rh= alel untuk faktor Rhesus)

	Genotype of mother <i>Genotip ibu</i>	Genotype of father <i>Genotip bapa</i>
A	Rh ⁻ Rh ⁻	Rh ⁺ Rh ⁺
B	Rh ⁺ Rh ⁻	Rh ⁺ Rh ⁻
C	Rh ⁻ Rh ⁻	Rh ⁻ Rh ⁻
D	Rh ⁺ Rh ⁺	Rh ⁺ Rh ⁺

48. Which of the following variations is influenced by both of genetic and environmental factors?

Antara berikut yang manakah dipengaruhi oleh faktor genetik dan faktor persekitaran.

- A Hair colour
Warna rambut
- B Blood group
Kumpulan darah
- C Thumbprint
Cap ibu jari
- D Colour blindness
Buta warna

49. Which of the following is **not** caused by the gene mutation?

*Antara yang berikut, yang manakah **tidak** disebabkan oleh mutasi gen?*

- A Albinism
Albinisme
- B Polydactylism
Polidaktilisme
- C Haemophilia
Hemofilia
- D Sickle-cell anaemia
Anemia sel sabit

50. Diagram 25(a) and (b) shows two types of variations in a human.
Rajah 25(a) dan (b) menunjukkan dua jenis variasi pada manusia.



Diagram 25(a)
Rajah 25(a)

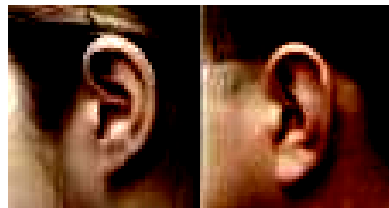


Diagram 25(b)
Rajah 25(b)

Which of the following comparisons between variation in Diagram 25(a) and Diagram 25(b) is **not correct**?

*Antara yang berikut, perbandingan yang manakah **tidak benar** antara variasi dalam rajah 25(a) dengan rajah 25(b).*

	Diagram A	Diagram B
A	Not distinctive <i>Tidak jelas</i>	Distinctive <i>Jelas</i>
B	The characters are qualitative <i>Ciri adalah kualitatif</i>	The characters are quantitative <i>Ciri adalah kuantitatif</i>
C	Shows a normal distribution <i>Menunjukkan taburan normal</i>	Shows a discrete distribution <i>Menunjukkan taburan diskrit</i>
D	Influenced by environmental factors <i>Dipengaruhi oleh 25faktor persekitaran</i>	Not influenced by environmental factors <i>Tidak dipengaruhi oleh 25faktor persekitaran</i>

END OF QUESTIONS
SOALAN TAMAT

PEPERIKSAAN PERCUBAAN BIOLOGI KERTAS 1 4551/1 DAERAH BATU PAHAT 2014.

SKEMA JAWAPAN

1	B	11	B	21	D	31	D	41	D
2	A	12	B	22	C	32	C	42	A
3	C	13	A	23	C	33	A	43	C
4	A	14	B	24	B	34	D	44	D
5	D	15	B	25	C	35	D	45	D
6	D	16	C	26	D	36	A	46	B
7	C	17	D	27	D	37	D	47	A
8	D	18	D	28	C	38	A	48	A
9	C	19	D	29	C	39	A	49	B
10	C	20	A	30	A	40	B	50	D