BIOLOGI
Kertas 1
Ogos
2010
$1\frac{1}{4}$ jam

JABATAN PELAJARAN NEGERI TERENGGANU

PEPERIKSAAN PERCUBAAN SIJIL PELAJARAN MALAYSIA 2010

BIOLOGI

KERTAS 1

Satu jam lima belas minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

1. *Kertas soalan ini mengandungi 50 soalan.*
2. *Kertas soalan ini disediakan dalam dwibahasa.*
3. *Jawab semua soalan.*
4. *Jawab dengan menghitamkan ruangan yang betul pada kertas jawapan yang disediakan.*
5. *Sekiranya anda hendak menukarkan jawapan, padamkan tanda yang telah dibuat. Kemudian hitamkan jawapan yang baru.*
6. *Rajah yang mengiringi soalan dimaksudkan untuk memberi maklumat yang berguna bagi menjawab soalan. Rajah tidak dilukis mengikut skala kecuali dinyatakan.*
7. *Anda dibenarkan menggunakan kalkulatur saintifik yang tidak boleh diprogram.*

Disediakan oleh:
AKRAM NEGERI TERENGGANU

Dibiayai oleh:
KERAJAAN NEGERI TERENGGANU

TERENGGANU ANJUNG ILMU

Dicetak oleh:
Percetakan Yayasan Islam Terengganu Sdn. Bhd.
Tel: 609-666 8611/6652/8601 Faks: 609-666 0611/0063

Kertas soalan ini mengandungi 30 halaman bercetak

1. Diagram 1 shows an organelle of a cell.
Rajah 1 menunjukkan organel yang terdapat di dalam suatu sel.

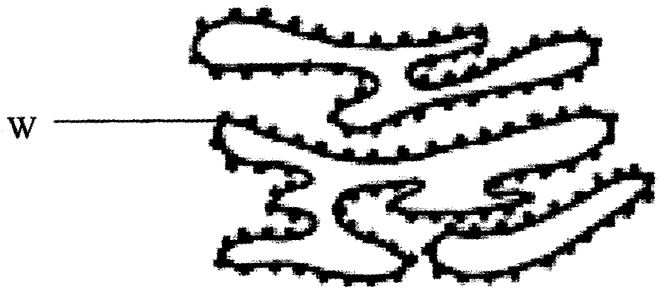


Diagram 1
Rajah 1

Which of the following processes occurs in W?
Antara proses berikut, yang manakah berlaku dalam W ?

A Photosynthesis
Fotosintesis

B Transport protein
Pengangkutan protein

C Synthesis of enzyme
Sintesis enzim

D Generation of energy
Penjanaan tenaga

2. Diagram 2 shows guard cell in plant.
Rajah 2 menunjukkan sel pengawal dalam suatu tumbuhan

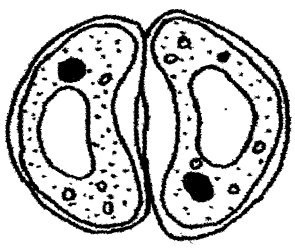


Diagram 2
Rajah 2

Which organelle is abundant in a guard cell?
Organel manakah yang paling banyak di dalam sel pengawal?

A Mitochondria
Mitokondria

B Vacoule
Vakoul

C Ribosome
Ribosom

D Chloroplast
Kloroplast

3. Diagram 3 shows a plant cell is immersed in solution A for 30 minutes. What is type of solution A?
Rajah 3 menunjukkan sel tumbuhan yang direndam dalam larutan A selama 30 minit. Apakah jenis larutan A?

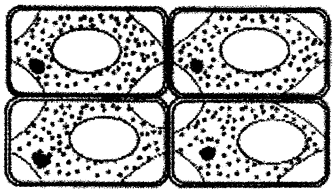


Diagram 3
Rajah 3

A Hypotonic
Hipotonik

B Isotonic
Isotonik

C Hypertonic
Hipertonik

D Carcinogenic
Karsinogenik

4. Based on diagram 4, name the process of transport oxygen and carbon dioxide in *Paramecium* sp?
Berdasarkan rajah 4, namakan proses pengangkutan oksigen dan karbon dioksida pada Paramecium sp. ?

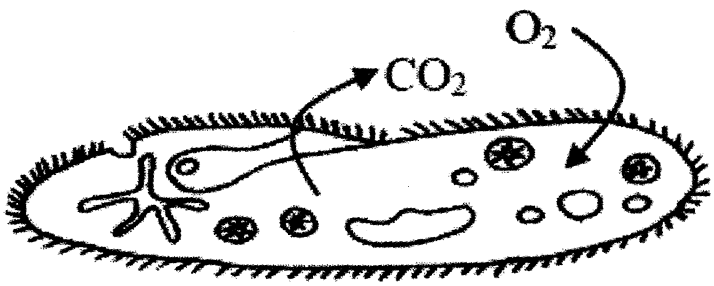


Diagram 4
Rajah 4

A Facilitated diffusion
Resapan berbantu

B Active transport
Pengangkutan aktif

C Osmosis
Osmosis

D Simple diffusion
Resapan ringkas

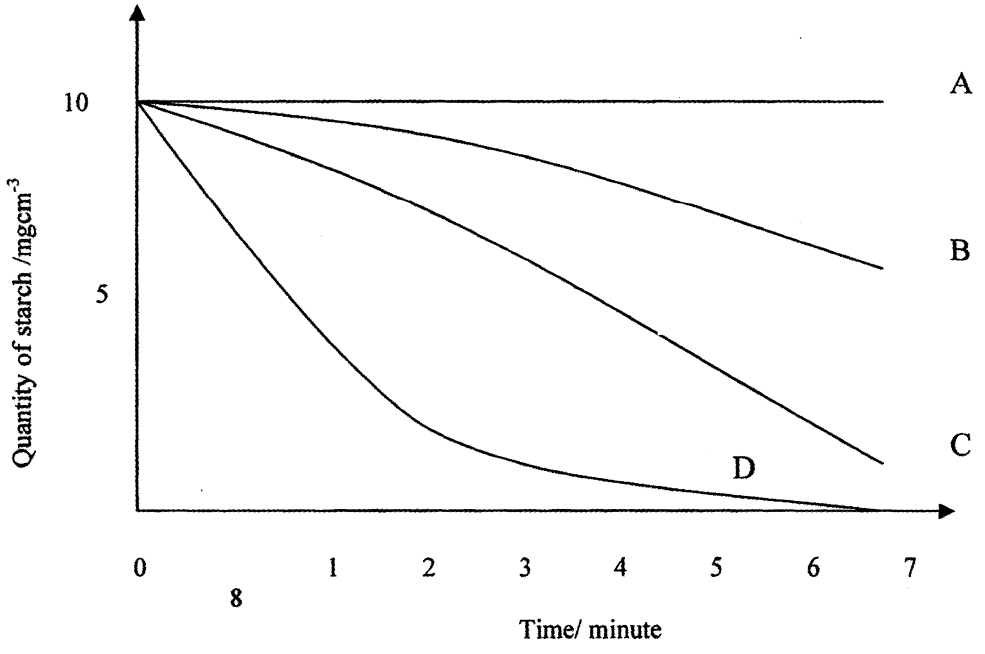
5. Which of the following is **not** lipid?
*Yang manakah di bawah **bukan** lipid?*

A	Waxes *Lilin*	C	Phospholipids *Fosfolipid*
B	Antibodies *Antibodi*	D	Steroids *Steroid*

6. Which of the following carbohydrates taste sweet and crystallize?
Yang manakah karbohidrat di bawah manis dan membentuk hablur?

A	Maltose *Maltosa*	C	Cellulose *Selulosa*
B	Glycogen *Glikogen*	D	Starch *Kanji*

7. The plotted graph shows the hydrolysis of starch by amylase in different temperature. Which of the following curve is the optimum temperature ?
Graf di atas diplotkan untuk menunjukkan proses hidrolisis kanji oleh amilase pada suhu yang berbeza. Di antara lengkung graf yang diplotkan, lengkung yang manakah merupakan bersuhu optimum?



8. Diagram 5 shows one of the phases in mitosis.
Rajah 5 menunjukkan salah satu peringkat mitosis.

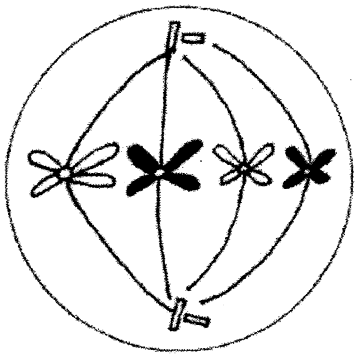


Diagram 5
Rajah 5

What is the phase?
Apakah fasa tersebut?

A Prophase
Profasa

B Anaphase
Anafasa

C Metaphase
Metafasa

D Telophase
Telofasa

9. Diagram 6 shows a process occur in Prophase I
Rajah 6 menunjukkan proses yang berlaku di dalam Profasa I.

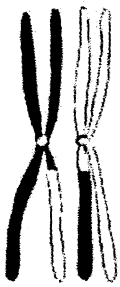


Diagram 6
Rajah 6

A Cytokinesis
Sitokinesis

B Chiasmata
Kiasmata

C Crossing over
Pindah silang

D Crossing genetic
Pindah genetik

10. Diagram 7 shows experiment to study photosynthesis.
What is function of sodium hydrogen carbonate solution used in this experiment?
Rajah 7 menunjukkan eksperimen untuk mengkaji fotosintesis.
Apakah fungsi larutan natrium hidrogen karbonat di dalam eksperimen ini?

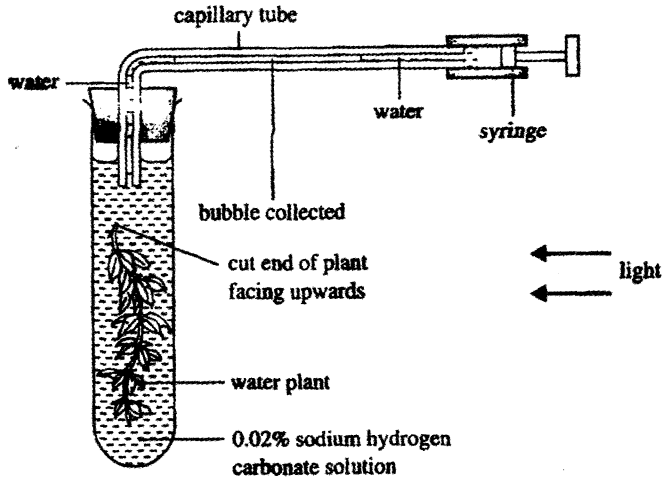


Diagram 7
Rajah 7

A Reducing agent
Agen penuruan

B Provide carbon dioxide
Membekalkan karbon dioksida

C Oxidation agent
Agen oksidasi

D Hydrolysis agent
Agen hydrolisis

11. Diagram 8 shows a stomach of ruminant. Which part is true stomach for ruminant?
Rajah 8 menunjukkan perut ruminant. Bahagian manakah merupakan perut sebenar ruminant?

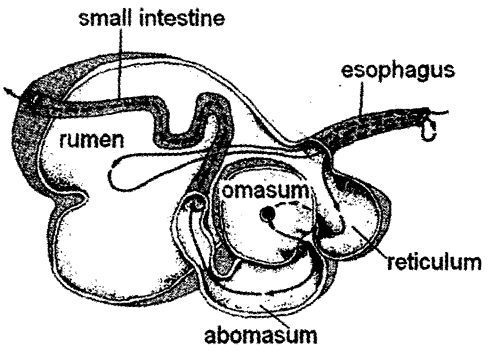


Diagram 8
Rajah 8

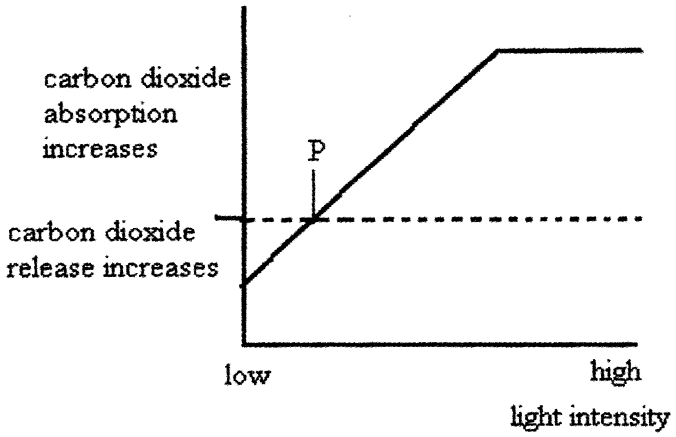
A Rumen
Rumen

B Omasum
Omasum

C reticulum
reticulum

D Abomasum
Abomasum

12. Explain what happen at point P.
Terangkan apa yang berlaku pada titik P.



A Rate of carbon dioxide produce during respiration is equal to rate of carbon dioxide consumption during photosynthesis
Kadar penghasilan karbon dioksida semasa respirasi sama dengan kadar penggunaan oksigen semasa fotosintesis

B Rate of carbon dioxide produce during respiration is higher than rate of carbon dioxide consumption during photosynthesis
Kadar penghasilan karbon dioksida semasa respirasi lebih tinggi dari kadar penggunaan oksigen semasa fotosintesis

C Rate of carbon dioxide produce during respiration is lower than rate of carbon dioxide consumption during photosynthesis
Kadar penghasilan karbon dioksida semasa respirasi lebih rendah dari kadar penggunaan oksigen semasa fotosintesis

D Rate of carbon dioxide produce during respiration is not equal to rate of carbon dioxide consumption during photosynthesis
Kadar penghasilan karbon dioksida semasa respirasi tidak sama dengan kadar penggunaan oksigen semasa fotosintesis

13.

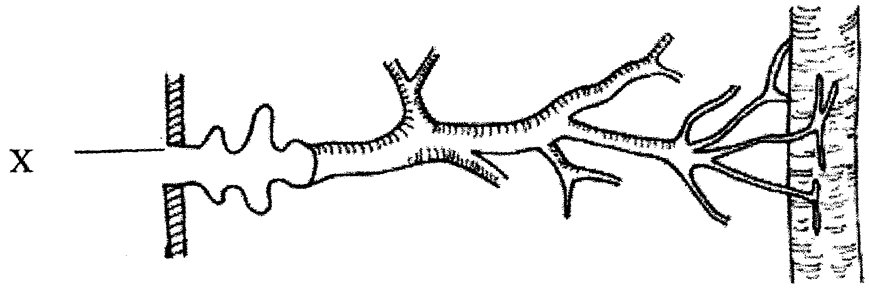


Diagram 9
Rajah 9

Diagram 9 shows the trachea system of an insects. Air enter the trachea through an opening labelled X. What is X?

Rajah 9 menunjukkan sistem trakea serangga. Udara memasuki trakea menerusi bukaan X. Apakah X?

A Bronchiole
Bronkiol

B Air sac
Pundi Udara

C Spiracle
Spirakel

D Tracheole
Trakeol

14. A group of students wants to estimate the percentage coverage of *Mimosa* sp. plants in the school field. The most suitable quadrate size to be used is
Sekumpulan pelajar ingin menganggarkan peratus litupan tumbuhan Mimosa sp. di padang rumput sekolah. Saiz kuadrat yang paling sesuai digunakan ialah

A 20 cm x 20 cm

B 10 m x 10 m

C 150 cm x 150 cm

D 50 m x 50 m

15. Diagram 10 shows a food web in an ecosystem.
Rajah 10 menunjukkan jaringan makanan.

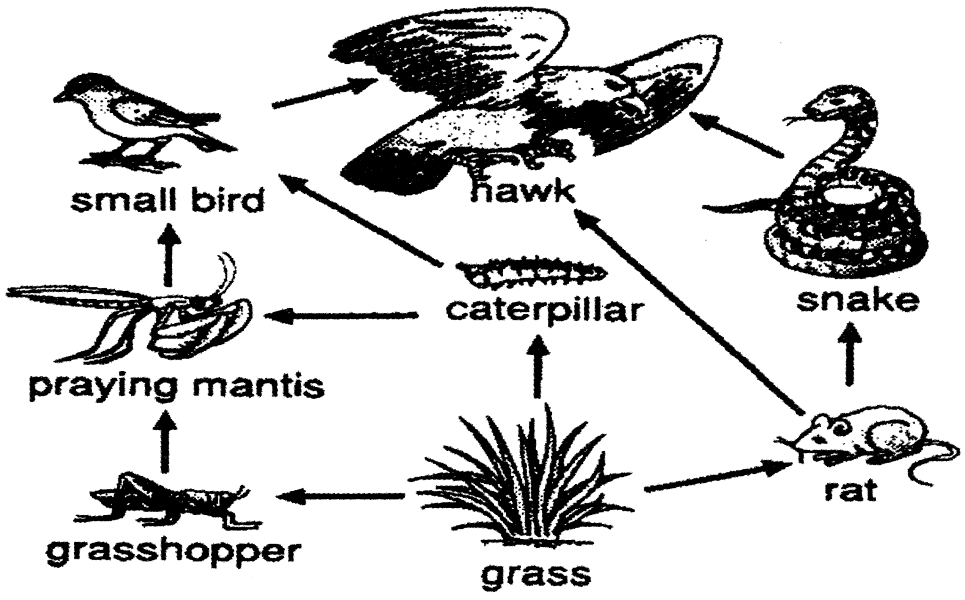


Diagram 10
Rajah 10

Which of the following represents the secondary consumers in the food web?
Yang manakah mewakili pengguna sekunder dalam jaringan makanan?

A Praying mantis, small bird, snake and hawk
Mentadak, burung kecil, ular dan burung hantu

B Praying mantis, rat and grasshopper
Mentadak, tikus dan belalang

C Rat, small bird and snake
Tikus, burung kecil dan ular

D Small bird, snake and hawk
Burung kecil, ular dan burung hantu

16. Diagram 11 shows the emission of various gases by a chemical factory in an industrial area.
Rajah 11 menunjukkan pengeluaran pelbagai jenis gas dari kilang kimia dalam suatu kawasan perindustrian

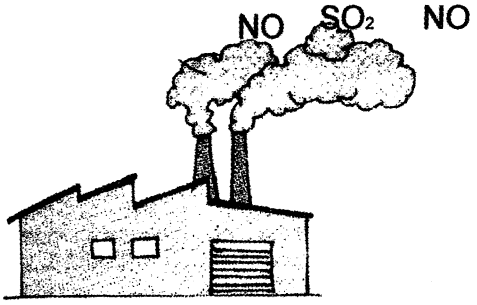


Diagram 11
Rajah 11

Which of the following phenomenon is the most likely to occur?
Antara fenomena di bawah, yang manakah lebih kerap berlaku?

A Acid rain
Hujan asid

B Global warming
Pemanasan global

C Green house effect
Kesan rumah hijau

D Thinning of ozone
Penipisan lapisan ozon

17. Which of the following is an effect of thermal pollution?
Yang manakah perkara di bawah adalah kesan pencemaran therma?

A Photosynthesis in aquatic plants is increased
Fotosintesis tumbuhan akuatik meningkat

B Growth rate in aquatic organism is increased
Kadar pertumbuhan organisma akuatik meningkat

C Population of aquatic organism is reduced
Populasi organisma akuatik berkurang

D Tropic level in a food chain is increased
Aras trofik dalam rantai makanan meningkat

18. Diagram 12 shows a structure of the heart and its associated blood vessels.
Rajah 12 menunjukkan struktur jantung dan salur darah yang berkaitan.

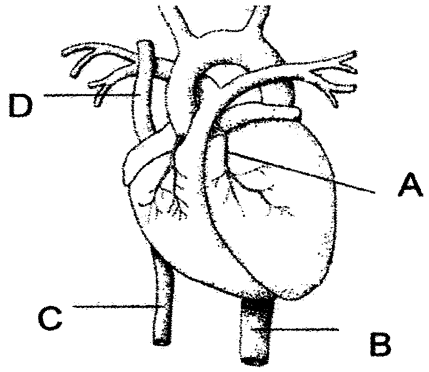


Diagram 12
Rajah 12

Which of the following A,B,C and D carry blood to body tissue?
Yang manakah dari berikut A, B, C dan D membawa kepada tisu badan?

19. Diagram 13 shows a section through the root of plant.
Rajah 13 menunjukkan keratan menerusi akar tumbuhan.

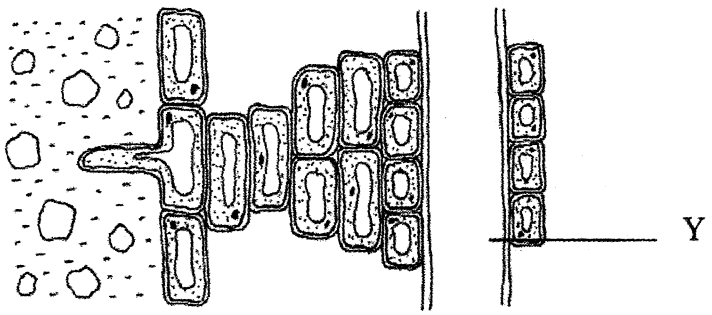


Diagram 13
Rajah 13

What is function of Y?
Apakah fungsi Y?

A To transport photosynthesis products
Mengangkut hasil fotosintesis

B To give turgidity to the tissues
Memberi kesegahan kepada tisu

C To transport water and mineral salts
Mengangkut air dan garam mineral

D To give support and mechanical strength
Memberi sokongan dan kekuatan mekanikal

20. Diagram 14 shows part of human forelimb.
Rajah 14 menunjukkan bahagian lengan manusia

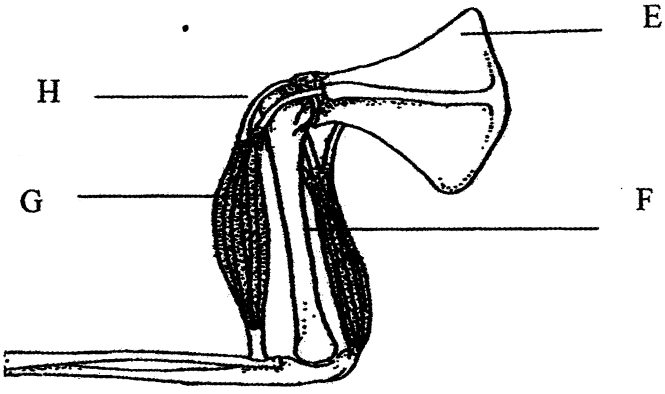


Diagram 14
Rajah 14

Name E, F, G and H
Namakan E, F, G and H

	E	F	G	H
A	Scapula *skapula*	Humerus *humerus*	Biceps *biseps*	Ligament *ligamen*
B	Scapula *skapula*	Humerus *humerus*	Biceps *biseps*	Tendon *tendon*
C	Clavicle *klavikel*	Radius *radius*	Triceps *triseps*	Tendon *tendon*
D	Clavicle *klavikel*	Radius *radius*	Triceps *triseps*	Ligament *ligamen*

21. Diagram 15 shows human lumbar vertebrae.
Rajah 15 menunjukkan vertebra lumbar manusia.

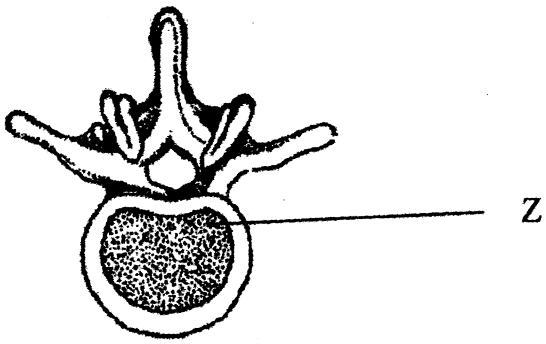


Diagram 15
Rajah 15

What is function of Z?
Apakah fungsi Z?

A Protection for the spinal cord
Perlindungan bagi saraf tunjang

B Surface for muscle attachment
Permukaan untuk perlekatan otot

C Surface to join with vertebrae
Permukaan untuk persendian dengan vertebra

D Provides support and absorbs shock
Menyediakan sokongan dan menyerap gegaran

22. Which of the following is **not** the difference between the endocrine system and the nervous system?
Yang manakah dari berikut bukan perbezaan di antara sistem endokrin dan sistem saraf?

	Endocrine system/ sistem endokrin	**Nervous system/ sistem saraf**
A	Consist of endocrine glands *Terdiri dari kelenjar endokrin*	Consist of neurons *Terdiri dari neuron*
B	Information is passed as hormones *Maklumat dihantar dalam bentuk hormone*	Information is passed as electrical signal *Maklumat dihantar dalam bentuk signal elektrik*
C	The responses is initiated rapidly *Gerak balas dimulakan sangat perlahan*	The responses is initiated slowly *Gerak balas dimulakan sangat cepat*
D	The response may carry on for a long time *Gerak balas berlaku dalam tempoh masa yang lama*	The response is short time *Gerak balas berlaku dalam tempoh yang singkat*

23. Diagram 16 shows stages of an ovarian cycle in ovary.
Rajah 16 menunjukkan peringkat perkembangan folikel di dalam ovari.

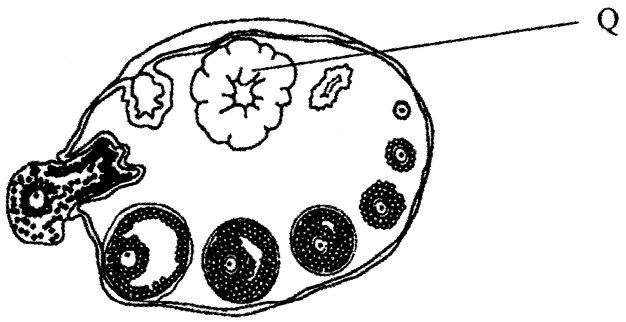


Diagram 16
Rajah 16

What hormone is excreted at stage Q ?
Apakah hormon yang dirembeskan ada peringkat Q?

A Oestrogen
Estrogen

B Progesterone
Progesteron

C Luteinising hormone
Hormon perluetinan

D Follicle stimulating hormone
Hormon perangsang folikel

24. Diagram 17 shows germinating of pollen tube.
Rajah 17 menunjukkan percambahan tiub debunga.

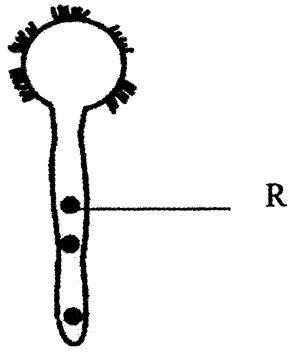


Diagram 17
Rajah 17

What is structure of R ?
Apakah struktur R ?

A Generative nucleus
Nukleus penjana

B Male nucleus
Nukleus jantan

C Tube nucleus
Nukleus tiub

D Pollen nucleus
Nukleus debunga

25. Diagram 18 shows a pair of homologous chromosomes in a somatic cell of the plant at the prophase I .
Rajah 18 menunjukkan sepasang kromosom homolog dalam sel soma suatu tumbuhan pada peringkat profasa I

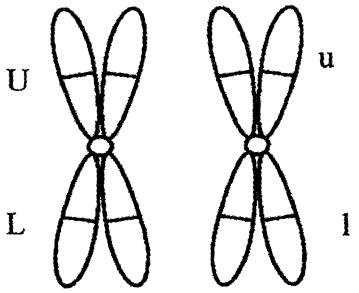


Diagram 18
Rajah 18

What is the genotype of the cell.
Apakah genotip sel tersebut?

A UuLl

B Ulul

C UlLu

D LUlu

26. Which of the following the different between chloroplast and mitochondria
Manakah yang berikut perbezaan antara kloroplas dan mitokondria

I Both of organelle has two membrane
Kedua-dua organel mempunyai dua membrane

II Mitochondria found in animal cell but chloroplast in plant cell
Mitokondria dijumpai dalam sel haiwan tetapi kloroplas dalam sel tumbuhan

III Chloroplast has photosynthetic enzyme but mitochondria has respiration enzyme
Kloroplas mempunyai enzim fotosintesis tetapi mitokondria mempunyai enzim respirasi

IV Chloroplast produce chemical energy during photosynthesis but mitochondria used chemical energy during respiration
Kloroplas menghasilkan tenaga kimia semasa fotosintesis tetapi mitokndria menggunakan tenaga kimia semasa respirasi

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

27. Diagram 19 shows the visking tube which filled with distilled water and soaked into sucrose solution.
Rajah 19 menunjukkan tiub visking yang diisi dengan air suling dan direndam di dalam larutan sucrose.

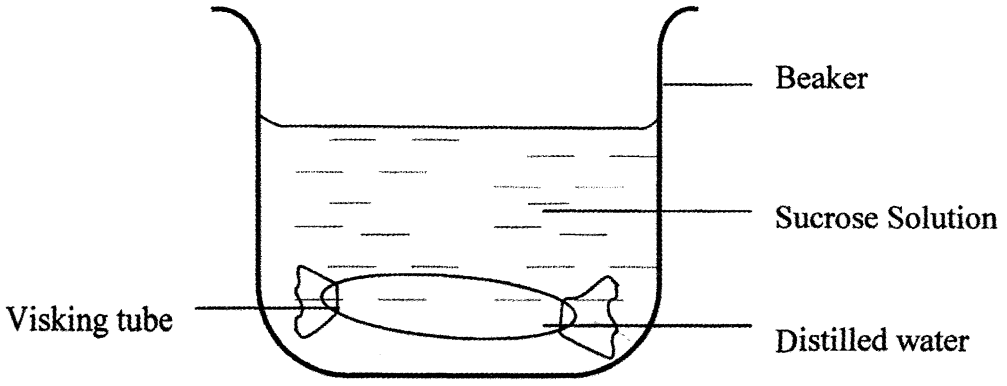


Diagram 19
Rajah 19

What is the observation after 30 minutes?
Apakah pemerhatian selepas 30 minit?

A Visking tube will swell.
Tiub visking akan mengembang

B No change occurred.
Tiada perubahan berlaku

C Visking tube will shrunk.
Tiub visking akan mengecut

D Visking tube will burst
Tiub visking akan pecah

28. Diagram 20 shows the effects of temperature on the rate of an enzyme reaction.
Rajah 20 menunjukkan kesan suhu ke atas

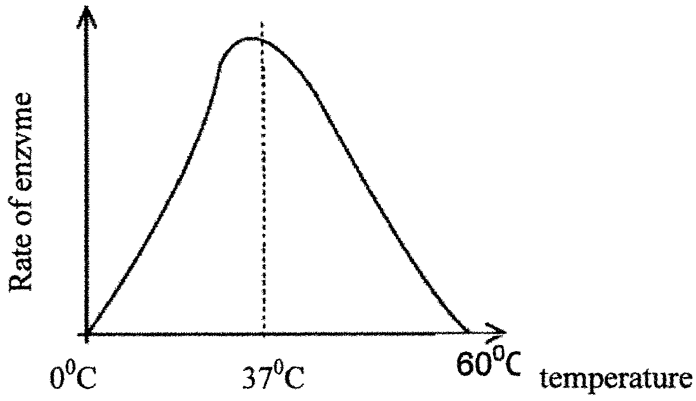


Diagram 20
Rajah 20

Which of the following statement is correct ?
Yang manakah penyataan di bawah betul

A When the temperatures is low, the rate enzyme reaction is high.
Bila suhu rendah, kadar tindak balas enzim tinggi

B When the temperatures is high, the rate of reaction is not accelerated
Bila suhu tinggi, kadar tindak balas enzim tidak bertambah

C When the temperatures is optimum, the rate of enzyme reaction is maximum
Bila suhu optimum, kadar tindak balas enzim maksimum

D When the temperatures is beyond the optimum, the rate of enzyme reaction is increase
Bila suhu meningkat sehingga optimum, kadar tindak balas enzim akan Bertambah

29. Diagram 21 shows the relationship between the rate of enzyme reaction and substrate concentration.
Rajah 21 menunjukkan perkaitan antara kadar tindak balas enzim dan kepekatan substrat

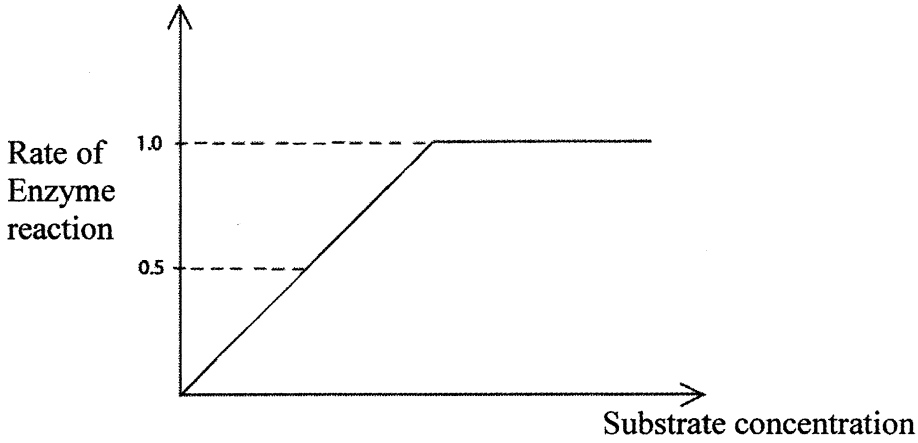


Diagram 21
Rajah 21

Which of the following statement is true?
Penyataan manakah yang benar?

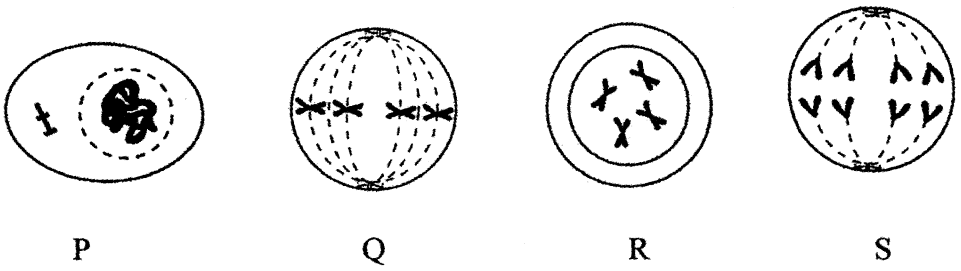
A The rate of enzyme reaction is directly proportional to substrate concentration.
Kadar tindak balas enzim berkadar terus dengan kepekatan substrat

B When the concentration of substrate increase, the rate of enzyme reaction increase until it reach at certain concentration.
Bila kepekatan substrat bertambah, kadar tindak balas enzim bertambah hingga mencapai kepekatan tertentu.

C When the concentration of substrate increase, the rate of enzyme reaction decrease until it reach at certain concentration.
Bila kepekatan substrat bertambah, kadar tindak balas enzim berkurang hingga mencapai kepekatan tertentu

D When the concentration of substrate decrease, the rate of enzyme reaction increase until it reach at certain concentration.
Bila kepekatan substrat berkurang, kadar tindak balas enzim bertambah hingga mencapai kepekatan tertentu

30. Diagram 22 shows the various stages of mitosis.
Rajah 22 menunjukkan pelbagai peringkat mitosis



P Q R S

Diagram 22
Rajah 22

Which of the following shows the correct sequence of the stages?
Yang manakah menunjuk susunan peringkat yang betul?

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

31. Diagram 23 shows a cell cycle.
Rajah 23 menunjukkan kitar sel

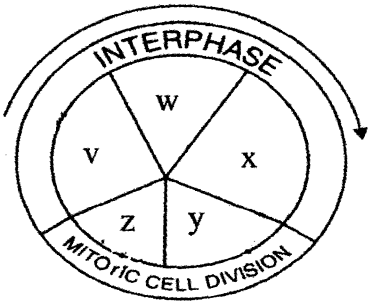


Diagram 23
Rajah 23

What is the process occur during W?
Apakah proses yang berlaku ketika W?

A. Replication of DNA
Replikasi DNA

B. Replication of centrioles
Replikasi sentriol

C. Chromosomes condense, become shorter and thicker
Kromosom padat, pendek dan tebal

D. High metabolic rate, synthesis of proteins and cellular organelles
Kadar metabolit tinggi, sintesis protein dan organel sel.

32. Diagram 24 shows the apparatus set-up for an experiment to study the movement of substances through the Visking tubing.
Rajah 24 menunjukkan susunan radas eksperimen untuk mengkaji pergerakan bahan menerusi tiub visking.

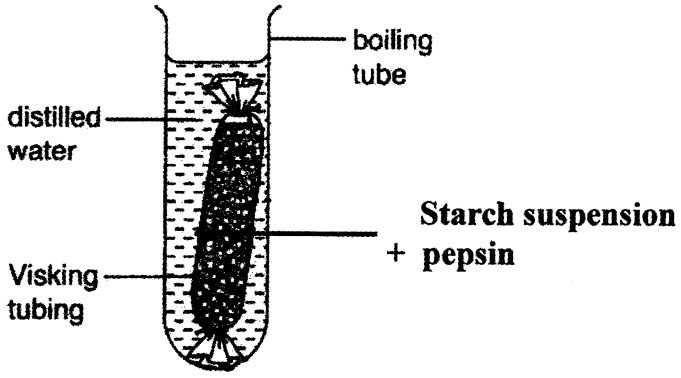
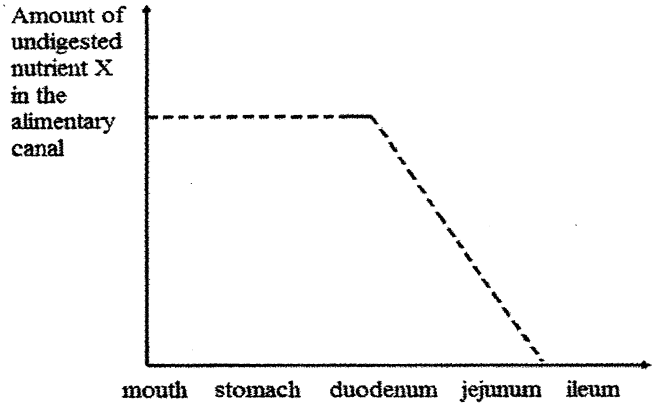


Diagram 24
Rajah 24

After one hour, samples of distilled water in the boiling tube are collected to perform the following food tests. Which of the following results will be obtained?
Selepas satu jam, sampel air suling di dalam tabung didih diambil untuk membuat ujian makanan. Yang manakah keputusan di bawah akan diperolehi?

	Iodine solution	Benedict's solution	Biuret's solution
A	Brownish-yellow	Blue	Blue
B	Blue-black	Blue	Purple
C	Brownish-yellow	Brick red precipitate	Blue
D	Blue-black	Brick red precipitate	Purple

33.



Which of the following is nutrient X?
Yang manakah di bawah adalah nutrien X?

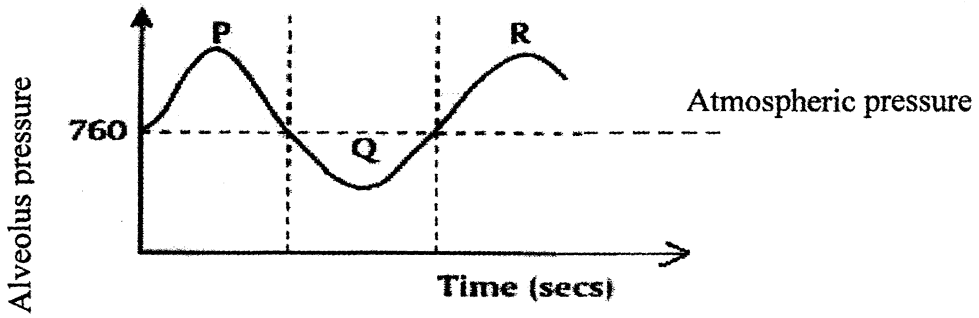
A Fat
Lemak

B Protein
Protein

C Starch
Kanji

D Cellulose
Selulos

34 The graph shows the change in air pressure in the alveolus during breathing.
Graf menunjukkan perubahan tekanan udara di dalam alveolus semasa bernafas



What happens at stage Q?
Apakah yang berlaku pada peringkat Q

I Atmospheric air is inhaled
Udara dari atmosfera disedut

II Rib cage is raised
Sangkar rusuk menaik

III Diaphragm flattens
Otot diafragma mendatar

IV External intercostals muscles relax
Otot interkosta luar mengendur

A I and II only
B I, II and III only
C III and IV only
D I, II, III and IV

35 Which of the following cause eutrophication?
Yang manakah berikut menyebabkan eutrofikasi

I. Run-off excess nutrients into pond
Pengaliran nutrien ke dalam kolam
II. Discharge of untreated sewage in water source
Pembuangan bahan kumbahan yang tidak dirawat ke dalam kolam
III. Increase photosynthesis rate of aquatic plant
Kadar fotosintesis meningkat pada tumbuhan akuatik
IV. Inorganic fertilizers dissolve into soil which contains water
Baja bukan organik yang larut di dalam tanah yang mengandungi air

A. I,II and III
B. I,II and IV
C. I,III and IV
D. II,III and IV

36 Diagram 25 shows the movement of a frog.
Rajah 25 menunjukkan pergerakan katak

Diagram 25
Rajah 25

Which of the following enables the above movement?
Antara berikut yang manakah membolehkan berlakunya pergerakan di atas ?

I Compact foot bone
Tulang kaki yang padat
II The hind leg folded into a "Z" shape
Kaki belakang dilipat berbentuk Z
III The muscle of front leg is small
Otot kaki hadapan yang kecil
IV The hind leg has well developed muscle
Kaki belakang mempunyai otot yang berkembang maju

A. I and II
B. II and III
C. II and IV
D. I, III and IV

37 Diagram 26 show a blood circulatory system in human
Rajah 26 menunjukkan sistem peredaran darah manusia

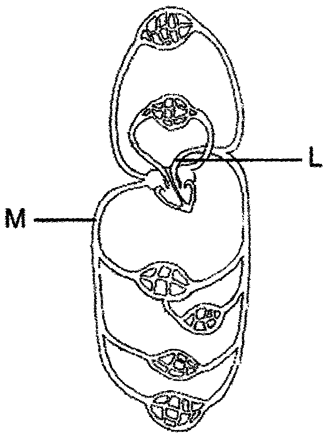


Diagram 26
Rajah 26

Which of the following is TRUE about blood flow and blood pressure at L and M?
Yang manakah penyataan di bawah ini BETUL mengenai aliran darah dan tekanan darah pada L dan M?

	L		M	
	Blood flow/ *Aliran darah*	Blood pressure/ *Tekanan darah*	Blood flow/ *Aliran darah*	Blood pressure/ *Tekanan darah*
A	Fast/ *Laju*	High/ *Tinggi*	Slow / *Perlahan*	Low/ *Rendah*
B	Fast/ *Laju*	Low / *Rendah*	Slow / *Perlahan*	Low / *Rendah*
C	Slow / *Perlahan*	High/ *Tinggi*	High/ *Tinggi*	High / *Tinggi*
D	Slow/ *Perlahan*	Low / *Rendah*	High / *Tinggi*	High / *Tinggi*

38. Diagram 27 shows the structure of an ovule
Rajah 27 menunjukkan struktur ovul

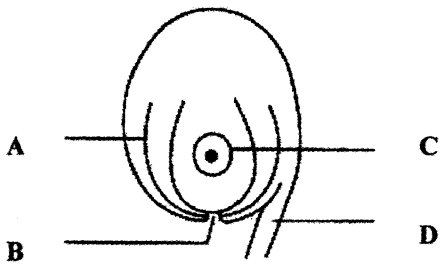


Diagram 27
Rajah 27

Which part develops into the testa after fertilization?
Bahagian manakah akan berkembang menjadi testa selepas persenyawaan

39 Which sex chromosomes from the mother's ovum and father's sperm can be found in their son?
Kromosom seks yang manakah dalam ovum ibu dan sperma bapa terdapat pada anak lelaki mereka ?

	Sex chromosomes in the ovum/ ***Kromosom seks dalam ovum***	**Sex chromosomes in the sperm/** ***Kromosom seks dalam sperma***
A	X	X
B	X	Y
C	Y	X
D	Y	Y

40 Diagram 28 shows the variation of a trait P in humans.
Rajah 28 menunjukkan variasi bagi trait P dalam manusia.

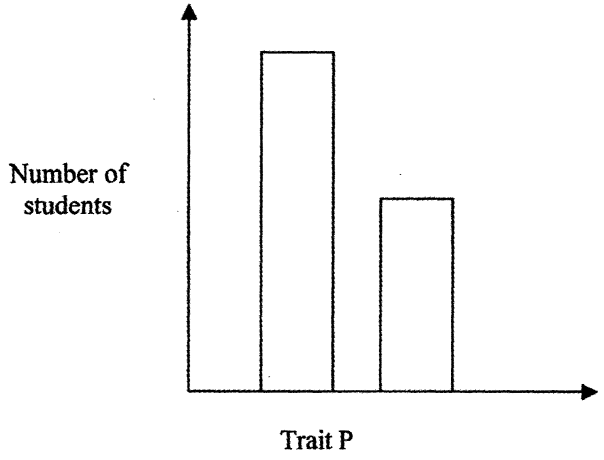


Diagram 28
Rajah 28

Which of the following is **true** about the variation trait P ?
*Antara berikut yang manakah **benar** tentang variasi bagi trait P ?*

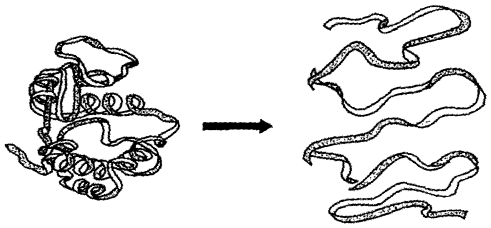
A Influenced by environmental factors
Dipengaruhi oleh faktor persekitaran

B Controlled by one pair of alleles
Dikawal oleh banyak pasangan alel

C The differences in a character are not distinctive
Perbezaan ciri yang tidak jelas

D Cannot be measured from one extreme characteristic to the other
Tidak dapat diukur dari satu ciri yang ketara dengan yang lain

41 Diagram 29 shows structure protein A and structure protein B.
Rajah 29 menunjukkan struktur protein A dan struktur protein B



A B

Diagram 29
Rajah 29

State the factors that affect the changes of structure protein A to structure protein B.
Nyatakan faktor yang menyebabkan perubahan struktur protein A kepada struktur protein B.

I	pH	II	Temperature *Suhu*
III	Salt concentration *Kepekatan garam*	IV	Humidity *Kelembapan*
A	I only	C	I and II only
B	II only	D	I, II, III and IV

42. Four different types of food samples with the same mass were burnt. The temperature of water in the boiling tube is taken before and after the experiment.
Empat sampel makanan berbeza dengan jisim yang sama dibakar. Suhu air di dalam tabung didih di ambil sebelum dan selepas eksperimen.

Which of the following food samples labeled P, Q, R and S contains the largest amount of lipids?
Yang manakah dari sampel makanan berlabel P, Q, R dan S mengandungi jumlah lipid yang paling banyak?

	Food sample *Sampel makanan*	Initial temperature of water *Suhu awal air* ^{0}C	Final temperature of water *Suhu akhir air* ^{0}C
A	P	18	37
B	Q	17	94
C	R	17	86
D	S	18	74

43. The diagram 30 shows an experiment to demonstrate the effect of cigarette smoke on the lungs.
Rajah 30 menunjukkan eksperimen untuk menunjukkan kesan asap rokok ke atas peparu.

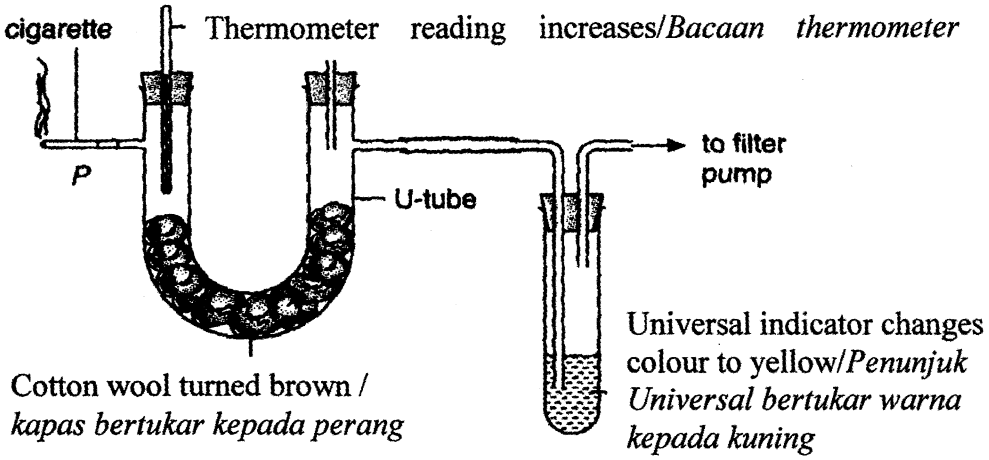


Diagram 30
Rajah 30

Based on the results of the experiment, what conclusions can be drawn about the effects
Of cigarette smoke on the human respiratory system?
Berdasarkan keputusan eksperimen, apakah rumusan kesan asap rokok ke atas sistem respiratory manusia

I Cigarette smoke is acidic.
Asap rokok berasid

II Cigarette smoke emits a strong smell.
Asap rokok mengeluarkan bau yang kuat

III Cigarette smoke causes an increase in the temperature of the lungs.
Asap rokok menyebabkan pertambahan suhu peparu.

IV Cigarette smoke causes tar to be deposited in the alveoli.
Asap rokok menyebabkan tar terenap dalam alveoli

A I, II and III only
C I, III and IV only
B II, III and IV only
D I, II, and IV only

44. The table shows the results of an experiment to study the population of garden snails in a vegetable farm.
Jadual menunjukkan keputusan kajian populasi siput kebun di dalam ladang sayuran.

Sequence of Capture/ *Turutan tangkapan*	Number of garden snails captured/ *Bilangan siput kebun yang ditangkap*	
First/ *Pertama*	200 marked/ *bertanda*	
Second/ *Kedua*	50 marked / *bertanda*	80 unmarked/ *Tidak bertanda*

What is the approximate population of the snails in the farm?
Berapakah anggaran populasi siput kebun?

A 125 C 330

B 320 D 520

45. The following information shows some steps in the reactions during the thinning of the ozone layer.
Berikut adalah maklumat yang menunjukkan langkah-langkah dalam tindak balas penipisan lapisan ozon

I. Ultra violet rays break down the chlorofluorocarbons (CFCs) to produce free chlorine atoms
Sinar ultra ungu memecahkan kloroflorokarbon untuk menghasilkan atom klorin bebas
II. Free chlorine atoms react with ozone molecules to produce chlorine monoxide and oxygen molecule
Atom klorin bebasbertindak balas dengan molekul ozon untuk menghasilkan klorin monoksida dan molekul oksigen
III. Free fluorine atoms react with ozone molecules to produce free oxygen atoms
Atom florin bebas bertindak dengan molekul ozon menghasilkan atom oksigen bebas
IV. Free oxygen atoms will break the chlorine monoxide bonds
Atom oksigen bebas akan memecahkan ikatan klorin

A I, II and III B I and II

C I and II D I, II and IV

46. A patient has been diagnosed with a blockage in artery due to deposition of cholesterol.
Identify the steps taken to prevent this disease
Seorang pesakit telah dikesan mengalami salur arteri tersumbat disebabkan oleh pengenapan kolestrol
Kenal pasti langkah-langkah yang perlu diambil untuk mencegah penyakit ini.

I Skip meals
Meninggalkan masa makan
II Exercise regularly
Kerap bersenam
III Taking slimming pills
Makan pil menguruskan badan
IV Reduce the intake of fried food
Kurangkan pengambilan makanan bergoreng

A I and II only
B I and III only
C II and IV
D III and IV

47. Diagram 31 show four postures.
Rajah 31 menunjukkan empat postur

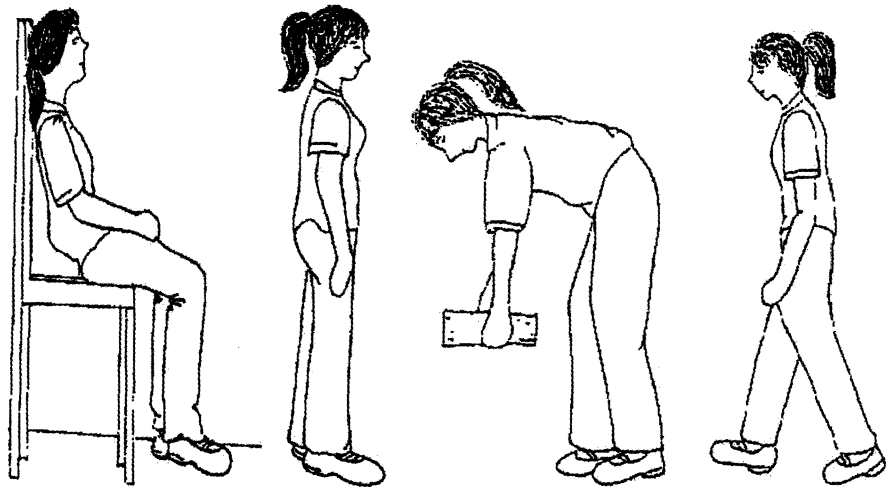


Diagram 31
Rajah 31

Which postures are good to maintain a healthy musculoskeletal system?
Postur manakah yang baik untuk mengekalkan sistem muskuloskeletal?

A P and Q only
C R and S only
B Q and S only
D P, Q and S only

48 Diagram 32 shows the pathway of an impulse in a reflex arc.
Rajah 32 menunjukkan laluan dalam arka refleks.

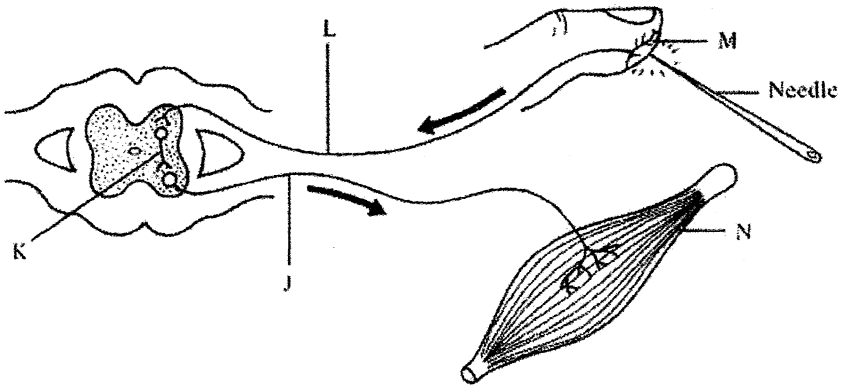


Diagram 32
Rajah 32

Which statement is true in the diagram?
Pernyataan yang manakah betul dalam rajah.

A N causes the finger to react
N menyebabkan jari bertindak

B The rate of impulse transmission through K increases
Kadar pemindahan impuls melalui K bertambah

C J receives an impulse direct from L and carries it to N
J menerima impuls dan membawanya kepada N

D L transmits the impulse to M from the central nervous system
L memindahkan impuls kepada N daripada sistem saraf pusat

49. One gene has alleles R and r. Another gene has alleles Y and y. A male heterozygous of both alleles is crossed with a female homozygous recessive for both alleles
Satu gen mempunyai alel R dan r. Gen lain mempunyai alel Y dan y. Lelaki heterozigot bagi kedua-dua alel dikacukkan dengan perempuan homozigot resesif bagi kedua-dua alel.

Which of the following are the probable genotype of the offspring.
Yang manakah kemungkinan genotip bagi anak.

	Genotype of the offspring / *Genotip anak*			
A	RRYY	RRyy	rrYY	RrYY
B	RrYy	Rryy	rrYy	rryy
C	rRyy	rryy	RRYy	RrYY
D	RRYY	rryy	rRyY	Rryy

50. What are the applications of DNA fingerprinting?
Apakah aplikasi cap jari DNA ?

I To help solve criminal cases
Untuk menyelesaikan kes jenayah

II To produce genetically modified organisms
Untuk menghasilkan organisma ubahsuaian genetik

III To produce insulin
Untuk menghasilkan insulin

IV To help settle paternity disputes
Untuk mengesahkan ibubapa biologi

A I and II only
B I and IV only
C II and III only
D III and IV only

END OF QUESTION PAPER
KERTAS SOALAN TAMAT