

SULIT



**JABATAN PELAJARAN
NEGERI JOHOR**



4551/1

PEPERIKSAAN PERCUBAAN SPM 2008

TINGKATAN 5

BIOLOGY

Kertas 1

September

$1 \frac{1}{4}$ 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. *Anda dibenarkan menggunakan kalkulator saintifik yang tidak diprogramkan.*
4. *Sila gunakan pencel 2B atau BB sahaja bila menghitamkan ruang jawapan bila menjawab soalan objektif.*
5. **Calon dikehendaki membaca maklumat di halaman belakang kertas soalan.**

Kertas soalan ini mengandungi 27 halaman bercetak.

INSTRUCTION : For Question 1 to Question 50, each question is followed by four options. A, B, C and D. Choose one correct answer for each question and blacken the corresponding space in your objective answer sheet.

1. What type of tissue is the bone?

Apakah jenis tisu bagi tulang?

- A Epithelial tissue
Tisu epitelial
- B Connective tissue
Tisu penghubung
- C Muscular tissue
Tisu otot
- D Nervous tissue
Tisu saraf

2. Which of the following cell structures is fully permeable to soluble substances?

Antara struktur sel berikut, yang manakah bersifat telap penuh untuk bahan –bahan yang larut air?

- A Vacuole
Vakuol
- B Plasma membrane
Membran plasma
- C Cell wall
Dinding sel
- D Nucleus
Nukleus

3. Diagram 1 shows a cell organelle

Rajah 1 menunjukkan organel cell

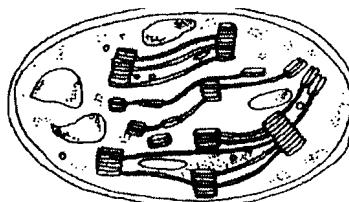


Diagram 1
Rajah 1

Which of the following cells does not possess the organelle in Diagram 1?

Antara sel-sel berikut, yang manakah tidak mengandungi organel dalam Rajah 1?

- A** Guard cell
Sel pengawal
- B** Epidermal cell
Sel epidermis
- C** Spongy mesophyll cell
Sel mesofil span
- D** Palisade cell
Sel palisad

4. Diagram 2 shows a unicellular organism.

Rajah 2 menunjukkan seekor organisma unisel

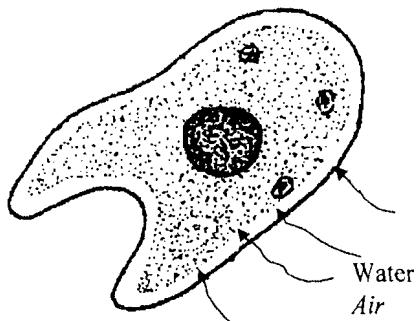


Diagram 2
Rajah 2

Which of the following processes facilitates the movement of water into the cell as shown in Diagram 2?

Antara proses yang berikut, yang mempercepatkan pergerakan air ke dalam sel seperti yang ditunjukkan dalam Rajah 2?

- A** Osmosis
Osmosis
- B** Active Transport
Pengangkutan Aktif
- C** Simple Diffusion
Resapan Ringkas
- D** Facilitated Diffusion
Resapan Ringkas

5. Diagram 3 is a graph showing the effect of different concentrations of sucrose solution on the mass of potato tissue.

Rajah 3 menunjukkan kesan kepekatan larutan sukrosa yang berbeza ke atas jisim tisu ubi kentang.

Percentage change in mass / %
Peratus perubahan jisim / %

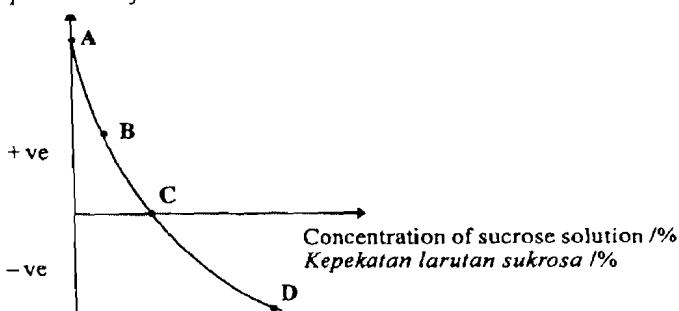


Diagram 3

Rajah 3

At which point A, B, C or D, does the potato cells become flaccid and plasmolysed?
Antara titik A, B, C dan D, yang manakah akan sel kentang berkeadaan flasid dan mangalami palsmolisis?

6. Diagram 4 shows a transport process in the cell.

Rajah 4 menunjukkan satu proses pengangkutan di dalam sel

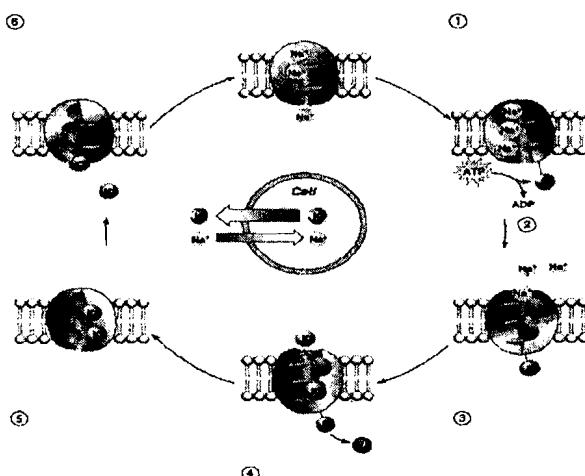


Diagram 4
Rajah 4

What is this process?
Apakah proses tersebut?

- A** Osmosis
Osmosis
- B** Active Transport
Pengangkutan Aktif
- C** Simple Diffusion
Resapan Ringkas
- D** Facilitated Diffusion
Resapan Ringkas

7. Diagram 5 shows the condition of a plant cell and an animal cell after being immersed in different concentrations of sucrose solution.

Rajah 5 menunjukkan keadaan satu sel tumbuhan dan satu sel haiwan setelah dimasukkan ke dalam kepekatan sukrosa yang berlainan.

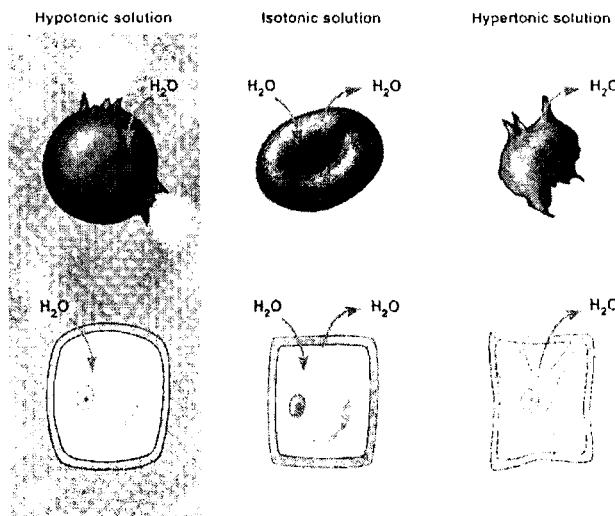


Diagram 5
Rajah 5

What are the states of the plant cell and the animal cell respectively?

Apakah keadaan sel tumbuhan dan sel haiwan masing-masing?

	Hypotonic Solution		Isotonic Solution		Hypertonic Solution	
	Plant cell <i>Sel tumbuhan</i>	Animal cell <i>Sel haiwan</i>	Plant cell <i>Sel tumbuhan</i>	Animal cell <i>Sel haiwan</i>	Plant cell <i>Sel tumbuhan</i>	Animal cell <i>Sel haiwan</i>
A	Plasmolysed <i>Terplasmolisis</i>	Crenated <i>Terkrenasi</i>	Turgid <i>Turgid</i>	Haemolysed <i>Terhemolisis</i>	Unchanged <i>Kekal sama</i>	Unchanged <i>Kekal sama</i>
B	Turgid <i>Turgid</i>	Haemolysed <i>Terhemolisis</i>	Unchanged <i>Kekal sama</i>	Unchanged <i>Kekal sama</i>	Plasmolysed <i>Terplasmolisis</i>	Crenated <i>Terkrenasi</i>
C	Plasmolysed <i>Terplasmolisis</i>	Crenated <i>Terkrenasi</i>	Unchanged <i>Kekal sama</i>	Unchanged <i>Kekal sama</i>	Turgid <i>Turgid</i>	Haemolysed <i>Terhemolisis</i>
D	Unchanged <i>Kekal sama</i>	Haemolysed <i>Terhemolisis</i>	Turgid <i>Turgid</i>	Unchanged <i>Kekal sama</i>	Plasmolysed <i>Terplasmolisis</i>	Crenated <i>Terkrenasi</i>

MOZ@C

8. Which of the following is the monomer of cellulose?

Antara yang berikut, yang manakah monomer bagi selulosa?

A Fatty acids.

Asid lemak

B Glycerol.

Gliserol

C Monosaccharides.

Monosakarida

D Amino acids.

Amino asid

9. Which of the following types of carbohydrate is found in large quantities in the liver?

Antara yang berikut, karbohidrat yang manakah banyak dijumpai di dalam hati?

A Starch

Kanji

B Glucose

Glukos

C Sucrose

Sukros

D Glycogen

Glikogen

10. Diagram 6 shows the effect of enzyme X on starch.

Rajah 6 menunjukkan kesan enzim X ke atas kanji

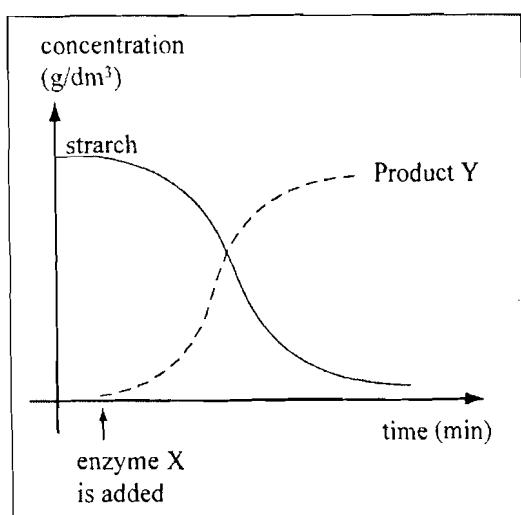


Diagram 6
Rajah 6

What is enzyme X and product Y?

Apakah enzim X dan hasil Y?

	Enzyme X Enzim X	Product Y Hasil Y
A	Amylase <i>Amilase</i>	Reducing sugar <i>Gula Penurun</i>
B	Amylase <i>Amilase</i>	Non-reducing sugar <i>Gula bukan penurun</i>
C	Maltase <i>Maltase</i>	Reducing sugar <i>Gula penurun</i>
D	Maltase <i>Maltase</i>	Non-reducing sugar <i>Gula bukan penurun</i>

11. Potato cells contain catalase that can break down hydrogen peroxide to release oxygen. Four sets of experiments were set up as shown in Diagram 7.

Sel kentang mengandungi katalase yang boleh memecahkan hidrogen peroksida kepada oksigen. 4 set eksperimen disediakan dengan menggunakan radas seperti dalam Rajah 7

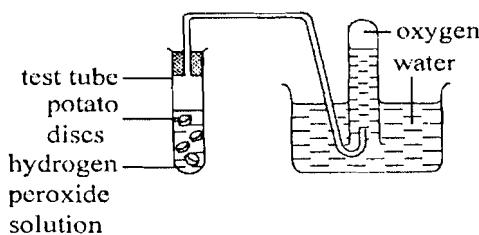


Diagram 7
Rajah 7

Which of the following experiments will release the most oxygen?

Antara eksperimen yang berikut, yang manakah akan membebaskan paling banyak oksigen?

	Amount of hydrogen peroxide solution/ cm ³	Number of potato discs	Treatment of the potato discs
A	5	5	Boiled
B	5	10	Fresh
C	5	10	Boiled
D	5	5	Fresh

12. Diagram 8 shows a phase in mitosis.

Rajah 8 menunjukkan satu peringkat mitosis

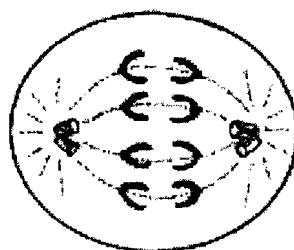


Diagram8

Rajah 8

What is this phase?

Apakah peringkat tersebut?

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

13. Which of the following events happens during prophase ?

Antara peristiwa yang berikut, yang manakah berlaku pada peringkat profasa?

- A Chromosomes duplicate to form chromatids
Kromosom mengganda dua membentuk kromatid
- B Chromatids separate and move towards the opposite poles
Kromatid berpisah dan bergerak ke arah kutub yang bertentangan
- C Centrioles separate and move towards the opposite poles
Sentriol berpisah dan bergerak ke arah kutub yang bertentangan
- D Chromosomes elongate to become chromatin threads again
Kromosom memanjang menjadi benang kromatin sekali lagi

14. The following are stages in cytokinesis in plant cells.

Berikut adalah peringkat-peringkat bagi proses sitokinesis di dalam sel tumbuhan.

- I The vesicles fuse to form a continuous barrier
Vesikel bercatut membentuk satu sekatan
- II The golgi apparatus produces vesicles
Jusad golgi menghasilkan vesikel
- III The vesicles migrate to the equator of the cell
Vesikel bergerak ke satah khatulistiwa sel
- IV The carbohydrate content in the vesicles is used to form the cell wall
Karbohidrat yang terkandung didalam vesikel digunakan untuk membentuk dinding sel

Which of the following is the correct sequence of these stages?

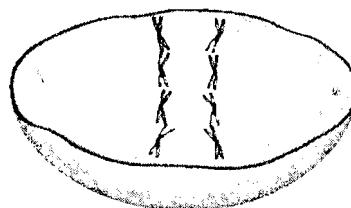
Antara urutan berikut, yang manakah betul bagi peringkat ini?

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

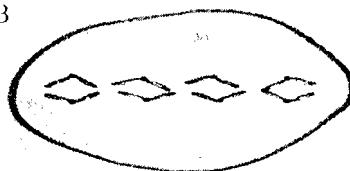
15. Which of the following diagrams show chromosomes in early anaphase 1?

Antara gambarah berikut, yang manakah menunjukkan kromosom-kromosom pada peringkat awal anafasa 1?

A



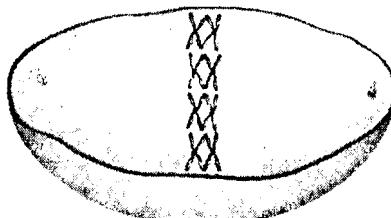
B



C



D



16. What is the role of bile in the digestion of food?

Apakah peranan hempedu dalam proses pencernaan makanan ?

- A To break down carbohydrates.

Untuk memecahkan karbohidrat

- B To help in absorption of amino acids.

Membantu proses penyerapan asid amino

- C To emulsify fats for easy digestion.

Mengejarsikan lemak bagi memudahkan proses pencernaan

- D To hydrolyse fats into fatty acids and glycerol.

Menghidrolisiskan lemak kepada asid lemak dan gliserol

17. Pond A has a large population of *Hydrilla*.

At what time will the water in pond A be most acidic?

Kolam A mengandungi populasi besar Hydrilla.

Pada waktu apakah air kolam A paling berasid?

- A 6.00 am

6.00 pagi

- B 12.00 pm

12.00 tengahari

- C 6.00 pm

6.00 petang

- D 9.00 pm

9.00 malam

18. Diagram 9 shows the cross-section of a dicotyledonous leaf.

Rajah 9 menunjukkan keratan rentas bagi daun dikotiledon.

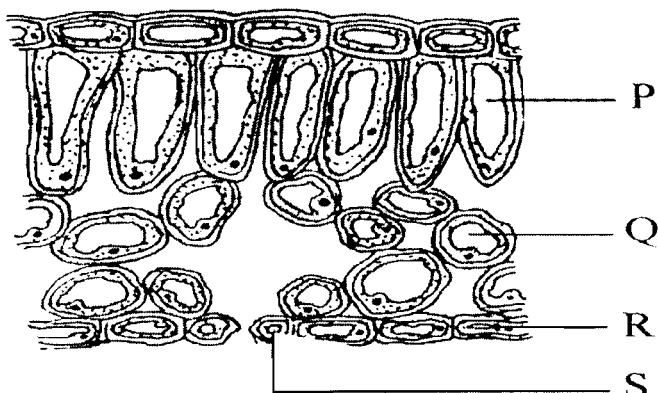


Diagram 9

Rajah 9

In which cells will photosynthesis take place?
Pada sel-sel yang manakah berlakunya fotosintesis ?

- A P and Q only.
P dan Q sahaja
- B P and R only.
P dan R sahaja
- C P, Q and S only.
P, Q dan S sahaja
- D P, Q, R and S
P, Q, R dan S

19. Table 1 shows an experiment to determine the content of vitamin C in lime juice.
Jadual 1 menunjukkan eksperimen bagi menentukan kandungan vitamin C di dalam jus limau nipis.

Sample <i>Sampel</i>	Volume required to decolourise 1.0 cm^3 of 0.1% DCPIP solution <i>Isipadu yang diperlukan untuk melunturkan 1.0 cm^3 larutan DCPIP 0.1%</i>
0.1% Ascorbic acid <i>Asid askorbik 0.1%</i>	0.3
Lime juice <i>Limau nipis</i>	1.5

Table I
Jadual 1

What is the amount of vitamin C in lime juice?
Berapakah kandungan vitamin C di dalam limau nipis ?

- A 0.2 mg/cm^3
0.2 mg/cm³
- B 0.5 mg/cm^3
0.5 mg/cm³
- C 0.3 mg/cm^3
0.3 mg/cm³
- D 5.0 mg/cm^3
5.0 mg/cm³

20. Diagram 10 shows a longitudinal section of a villus.
Rajah 10 menunjukkan keratan memanjang villus?

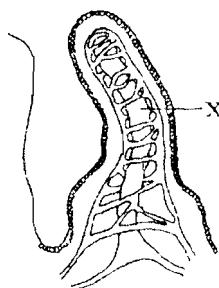


Diagram 10
Rajah 10

Which of the following nutrients are found in X?

Antara nutrient berikut, yang manakah dijumpai di X?

- I Glucose
Glukosa
- II Amino acid
Asid amino
- III Fatty acids
Asid lemak
- IV Vitamin D
Vitamin D

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

21. Diagram 11 shows two processes which occurs in living organisms.
Diagram 11 menunjukkan dua proses yang berlaku di dalam organisma hidup.

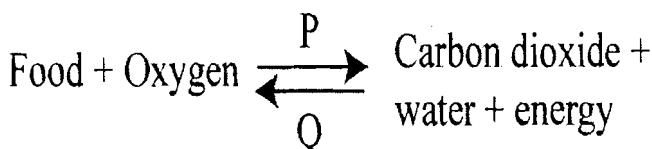


Diagram 11
Rajah 11

What does P and Q represent?
Apakah yang diwakili oleh P dan Q?

MOZ@C

	P	Q
A	Inhalation <i>Menarik nafas</i>	Exhalation <i>Menghembus nafas</i>
B	Respiration <i>Respirasi</i>	Photosynthesis <i>Fotosintesis</i>
C	Nutrition <i>Nutrisi</i>	Excretion <i>Perkumuhan</i>
D	Hydrolysis <i>Hidrolisis</i>	Condensation <i>Kondensasi</i>

22. Diagram 12 shows an experiment to study the concentration carbon dioxide in pond water. After 3 hours, the pond water in each tube was tested with bicarbonate indicator.

Rajah 12 menunjukkan satu eksperimen bagi mengkaji kepekatan karbon dioksida di dalam air kolam. Selepas 3 jam, air kolam dalam setiap tiub diuji dengan penunjuk bikarbonat

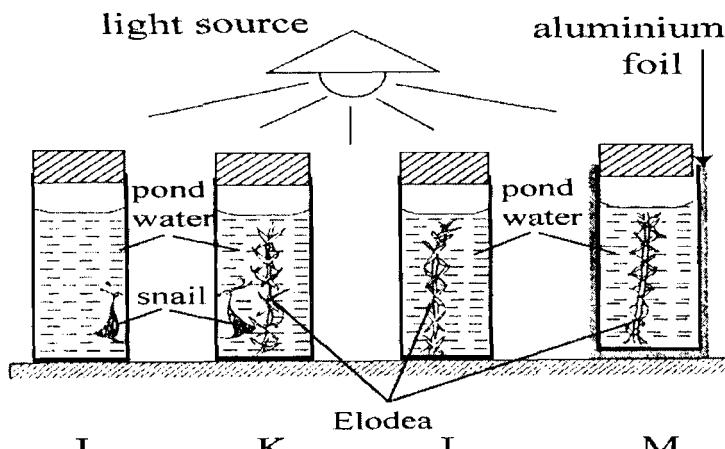


Diagram 12
Rajah 12

Which of these tubes will produce a yellow colour?

Tabunguji yang manakah akan menghasilkan warna kuning?

- A J and K only
J dan K sahaja
- B J, K and L only
J, K dan L sahaja
- C J and M only
L dan M sahaja
- D K, L and M only
K, L dan M sahaja

23. Which of the following explains why a cockroach will not drown if only its head is immersed in water?

Antara yang berikut, yang manakah menerangkan mengapa seekor lipas tidak akan mati lemas jika hanya kepalanya yang terrendam di dalam air?

- A It can get oxygen from the water.
Ia boleh mendapatkan oksigen daripada air
- B It can survive without oxygen.
Ia boleh hidup tanpa oksigen
- C It has gills in its head.
Ia mempunyai insang di dalam kepalanya
- D It has spiracles in its abdomen.
Ia mempunyai spirakel pada abdomennya

24. The experiment was set up as shown as Diagram 13 and left for a few hours.

Eksperimen telah disediakan seperti dalam Rajah 13 dan ditinggalkan untuk beberapa jam

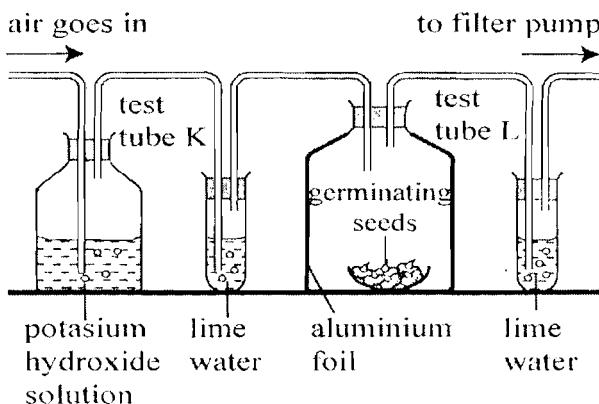


Diagram 13

Rajah 13

At the end of the experiment, the lime water in test tube L turned cloudy while that in test tube K remained clear.

Which of the following best explains the results above?

Pada akhir eksperimen, air kapur dalam tabung uji L telah menjadi keruh sementara tabung uji K kekal jernih.

Antara yang berikut, yang manakah menerangkan keputusan yang diperolehi di atas?

- A Carbon dioxide is released during aerobic respiration.
Karbon dioksida dibebaskan semasa respirasi aerobik
- B Carbon dioxide is needed during photosynthesis.
Karbon dioksida diperlukan semasa fotosintesis
- C Oxygen is required for seed germination.
Oksigen diperlukan bagi percambahan biji benih
- D Oxygen is released during photosynthesis.
Oksigen dibebaskan semasa proses fotosintesis

MOZ@C

25. Animals which live on the surface of other animals but does not derive any food or other materials from their hosts.
Haiwan yang hidup di atas permukaan haiwan lain tetapi tidak mendapatkan sebarang bahan atau makanan daripada perumahnya.

The above statement best describes
Pernyataan di atas memperihalkan

- A Parasites
parasit
- B epiphytes.
epifit
- C saprophytes
saprofit
- D epizoites.
epizoit

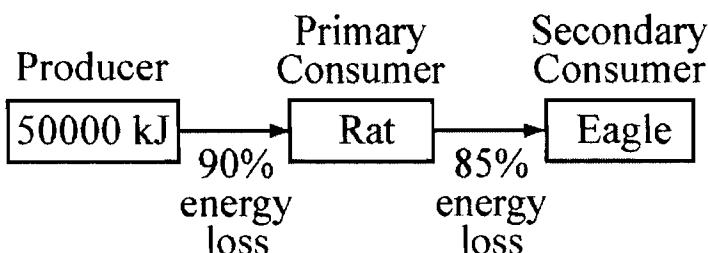
26. The scientific name for the frog is *Bufo melanostictus*. What does *Bufo* and *melanostictus* represent?

Nama saintifik bagi katak ialah Bufo melanostictus. Apakah yang dimaksudkan dengan Bufo dan melanostictus?

	<i>Bufo</i>	<i>melanostictus</i>
A	Phylum <i>Filum</i>	Species <i>Spesis</i>
B	Family <i>Famili</i>	Genus <i>Genus</i>
C	Genus <i>Genus</i>	Species <i>Spesis</i>
D	Class <i>Kelas</i>	Order <i>Order</i>

27. Diagram 14 shows the energy flow in an ecosystem.

Rajah 14 menunjukkan pengaliran tenaga dalam sebuah ekosistem



What is the amount of energy received by the secondary consumer?
Berapakah jumlah tenaga yang diterima oleh pengguna sekunder?

- A 750 KJ
750 KJ
- B 15 000 KJ
15 000 KJ
- C 30 000 KJ
30 000KJ
- D 38 250 KJ
38 250 KJ

28. Carbon monoxide is a poisonous gas because it
Karbon monoksida adalah gas beracun kerana ia

- A hurts the eyes.
menyakitikan mata
- B competes with oxygen to combine with haemoglobin.
bersaing dengan oksigen untuk bergabung dengan hemoglobin
- C inhibits the formation of red blood cells.
merencat pembentukan sel darah merah
- D decreases the rate of diffusion of gases in the alveoli.
menurunkan kadar resapan gas dalam alveolus

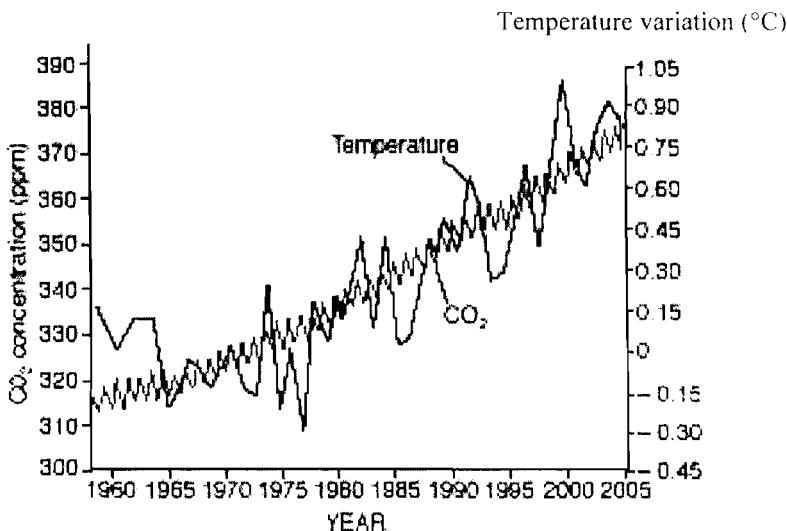
29.

Heat is reflected from the surface of the Earth and trapped in the atmosphere.
Haba dipantulkan daripada permukaan bumi dan terperangkap di atmosfera.

Which of the following phenomena is described in the above statement?
Antara fenomenon berikut, yang manakah diperihalkan di atas?

- A Ozone depletion.
Penyusutan lapisan ozon
- B Global warming.
Pemanasan sejagat
- C Increase in temperature.
Peningkatan suhu
- D Green house effect.
Kesan rumah hijau

- 30 Graph 1 shows the effect of carbon dioxide concentration on temperature.
Which of the following is the result of this effect ?
Graf 1 menunjukkan kesan kepekatan karbon dioksida ke atas suhu.
Antara yang berikut, yang manakah akan terhasil akibat daripada kesan ini ?



Graph 1
Graf 1

- A Acid rain
Hujan asid
 - B Thinning of ozone layer
Penipisan lapisan ozon
 - C Global warming
Pemanasan sejagat
 - D Eutrophication
Eutrofikasi
31. Diagram 15 shows the longitudinal section of the human heart. Which of the following blood vessels carry deoxygenated blood?
Rajah 15 menunjukkan keratan memanjang jantung manusia. Antara salur durah berikut yang manakah membawai darah terdeoksigen?

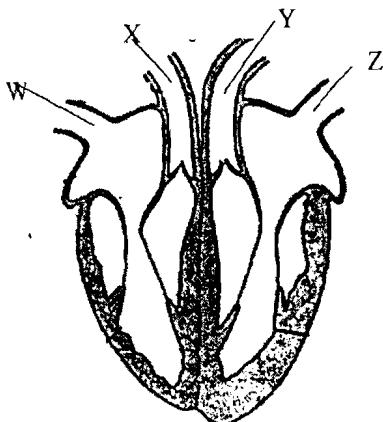


Diagram 15

Rajah 15

- A W and X.
W dan X
 - B Y and Z.
Y dan Z
 - C W and Y.
W dan Y
 - D X and Z.
X dan Z
32. Diagram 16(a) and 16(b) shows the concentration of antibodies in the blood stream of individuals X and Y after receiving two injections each. What type of immunity is obtained by X and Y ?
Rajah 16(a) dan 16(b) menunjukkan kepekatan antibodi didalam aliran darah bagi individu X dan Y selepas menerima 2 suntikan. Apakah jenis keimunan yang diperolehi bagi X dan Y ?

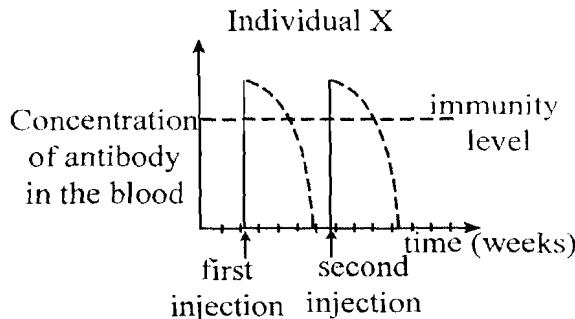


Diagram 16(a)

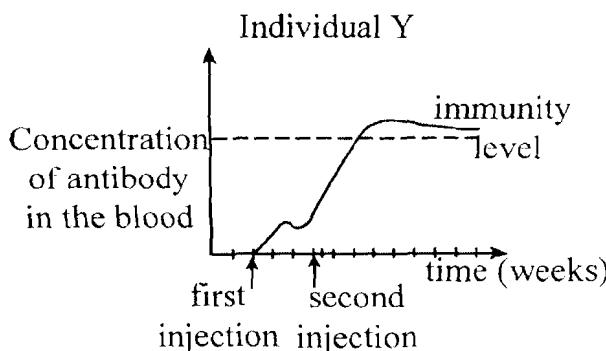
Rajah 16(a)

Diagram 16(b)

Rajah 16(b)

	Individual X	Individual Y
A	Artificially acquired active immunity. <i>Keimunan aktif buatan</i>	Artificially acquired passive immunity. <i>Keimunan pasif buatan</i>
B	Artificially acquired passive immunity. <i>Keimunan pasif buatan</i>	Artificially acquired active immunity. <i>Keimunan aktif buatan</i>
C	Naturally acquired active immunity. <i>Keimunan aktif semulajadi</i>	Naturally acquired passive immunity. <i>Keimunan pasif buatan</i>
D	Naturally acquired passive immunity <i>Keimunan pasif semulajadi</i>	Naturally acquired active immunity <i>Keimunan aktif semulajadi</i>

33. Which of the following is the valve that prevents the blood from the left ventricle from flowing back into the left atrium?

Antara injap berikut, yang manakah menghalang pengaliran balik darah dari ventrikel kiri ke atrium kiri?

- A Semilunar valve

Injap sabit

- B Bicuspid valve

Injap bikuspid

- C Tricuspid valve

Injap trikuspid

- D Pocket valve

Injap saku

34. The atlas and the axis are both

Atlas dan aksis kedua-duannya adalah .

- A Cervical vertebrae

Vertebra serviks

- B Lumbar vertebrae

Vertebra lumbar

- C Thoracic vertebrae

Vertebra toraks

- D Coccyx vertebrae

Vertebra koksik

35. A young plant wilts when it is dug up and re-planted in another place.

Which of the following causes this ?

Pokok muda akan layu apabila digali dan di tanam semula di tempat lain.

Antara berikut, yang manakah menyebabkan kejadian ini?

- A The stem cannot transport water

Batangnya tidak boleh mengangkut air

- B The number of leaves is reduced

Bilangan daunnya dikurangkan

- C The roots cannot take up mineral salts

Akarnya tidak boleh mengambil garam galian

- D The surface area of the roots is reduced

Luas permukaan akaranya dikurangkan

36. Diagram 17 shows the anterior view of the cervical vertebra. Which of the following parts labeled P, Q, R, S and T, are also found in both the thoracic and the lumbar vertebrae?

Rajah 17 menunjukkan pandangan anterior bagi vertebra serviks. Antara bahagian yang berlabel P, Q, R, S dan T, yang manakah terdapat pada kedua-dua vertebra toraks dan lumbar?

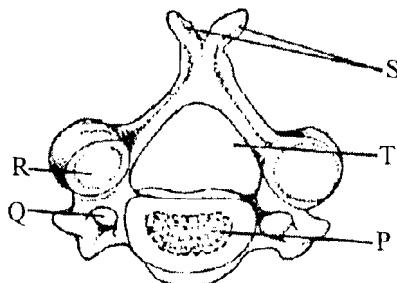


Diagram 17
Rajah 17

- A P, S and T only.
P, S dan T sahaja
- B Q, R and T only.
Q, R dan T sahaja
- C P, R, S and T only.
P, R, S dan T sahaja
- D P, Q, R, S and T only.
P, Q, R, S dan T sahaja

- .37. Diagram 18 shows two bones that are involved in the bending of the leg. Which of the following tissues connects the parts labeled X and Y?

Rajah 18 menunjukkan dua tulang yang terlibat dalam pembengkokan kaki. Antara tisu berikut, yang manakah menyambungkan bahagian yang berlabel X dan Y?

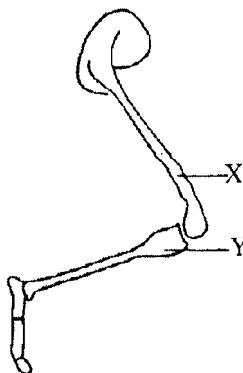


Diagram 18
Rajah 18

- A Skeletal muscle.
Otot rangka
- B Tendon.
Tendon
- C Ligament.
Ligamen
- D Cartilage.
Rawan
38. Diagram 19 shows part of a joint at the human pelvic girdle. Which of the following will be caused by an injury that severs X?

Rajah 19 sebahagian sendi pada lengkungan pelvis manusia. Antara berikut, yang manakah akan terjadi akibat kecederaan yang akan memutuskan bahagian X?

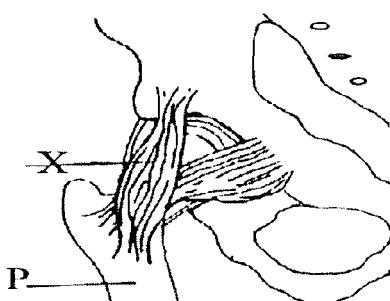


Diagram 19
 Rajah 19

- A P will break
P akan patah
- B The surface of P will wear off
Permukaan P akan haus
- C P will dislodge from the socket.
P akan terkeluar daripada soketnya
- D The bone density of P will decrease
Densiti tulang P akan berkurangan
39. Which of the following fins helps the fish to overcome pitching when swimming?
Antara sirip berikut, yang manakah membantu ikan mengatasi masalah junaman semasa berenang?
- A. Dorsal fin
Ridip
- B. Ventral fin
Sirip ventral

- C. Pectoral fin
Sirip pektoral
- D. Caudal fin
Sirip ekor

40. A boy is paralyzed because of an injury to his head. Which part of his brain is damaged?
Seorang budak lelaki lumpuh kerana kemalangan pada kepala. Bahagian manakah dalam otaknya yang telah tercedera ?
- A Cerebrum.
Serebrum
 - B Cerebellum.
Serebelum
 - C Hypothalamus.
Hipotalamus
 - D Medulla oblongata
Medula oblongata
41. Certain drugs are classified as depressants . What is the effect of a depressant ?
Sesetengah ubat dikelaskan sebagai penenang. Apakah kesan penenang?
- A Inhibits pain
Mengelakkan sakit
 - B Causes euphoria
Menyebabkan perasaan sangat gembira
 - C Increases the activity of the central nervous system.
Meningkatkan aktiviti sistem saraf pusat
 - D Decreases the activity of the central nervous system.
Menurunkan aktiviti sistem saraf pusat
42. Diagram 20 shows part of a man's nervous system that has been cut at X.
Rajah 20 menunjukkan bahagia sistem saraf seorang lelaki yang telah di potong di X.

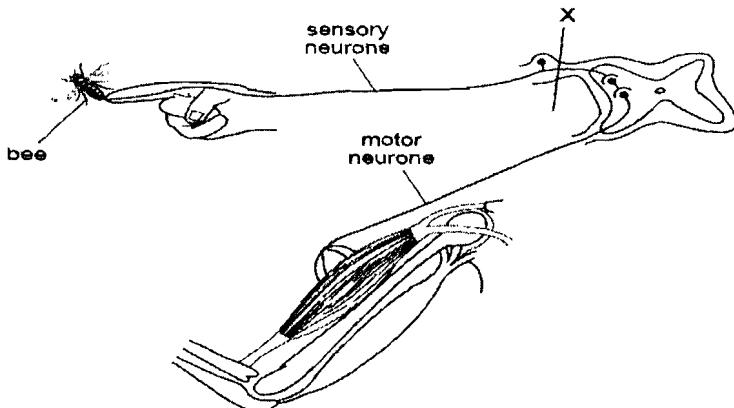


Diagram 20
Rajah 20

A bee stings his finger, as shown. What will be the effects on the man ?
Seekor lebah menyengat jarinya, seperti yang ditunjukkan. Apakah kesan sengatan ini kepada lelaki itu ?

	Pain felt	Arm moved
A	No	no
B	No	yes
C	Yes	No
D	Yes	Yes

43. Diagram 21 shows part of a flower at a stage during reproduction.

Rajah 21 menunjukkan satu peringkat pada bunga semasa pembiakan.

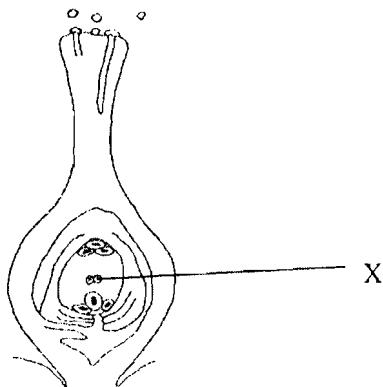


Diagram 21
Rajah 21

Which of the following is structure X?

Antara berikut, yang manakah struktur X?

MOZ@C

- A Egg cell
Sel telur
- B Polar nuclei
Nukleus kutub
- C Synergid cell
Sel sinergid
- D Antipodal cell
Sel antipodal

44. Which of the following is the correct chromosomal number for the stages of spermatogenesis?

Yang manakah di antara berikut benar mengenai bilangan kromosom pada peringkat-peringkat spermatogenesis?

	Spermatogonium	Primary Spermatocyte	Secondary spermatocyte	Spermatid
A	Diploid <i>Diploid</i>	Haploid <i>Haploid</i>	Haploid <i>Haploid</i>	Haploid <i>Haploid</i>
B	Diploid <i>Diploid</i>	Diploid <i>Diploid</i>	Haploid <i>Haploid</i>	Haploid <i>Haploid</i>
C	Diploid <i>Diploid</i>	Diploid <i>Diploid</i>	Diploid <i>haploid</i>	Haploid <i>Haploid</i>
D	Diploid <i>Diploid</i>	Diploid <i>Diploid</i>	Diploid <i>Diploid</i>	Diploid <i>diploid</i>

45. Diagram 22 shows the reproductive system of a man. Predict what would happen if a large tumor develops in R.

Rajah 22 di tunjukkan sistem pembiakan lelaki. Ramalkan apa yang berlaku jika terdapat tumor besar berlaku di R.

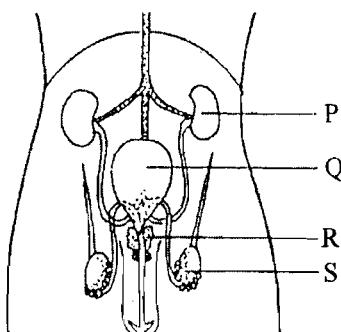


Diagram 22

MOZ@C

- A S will become swollen.
S akan menjadi bengkak
- B P will shrink
P akan mengecut
- C Spermatogenesis will not occur
Spermatogenesis tidak akan berlaku
- D Urination will be obstructed
Pengeluaran air kencing akan disekat
46. Which part of a plant will develop into a fruit?
Bahagian manakah pada tumbuhan yang akan berkembang menjadi buah?
- A Integument
Integumen
- B Ovule
Ovul
- C Radicle
Radikel
- D Ovary
Ovari
47. Diagram 23 shows a dihybrid cross between two pea plants
Rajah 23 menunjukkan kacukan dihibrid di antara dua pokok kacang

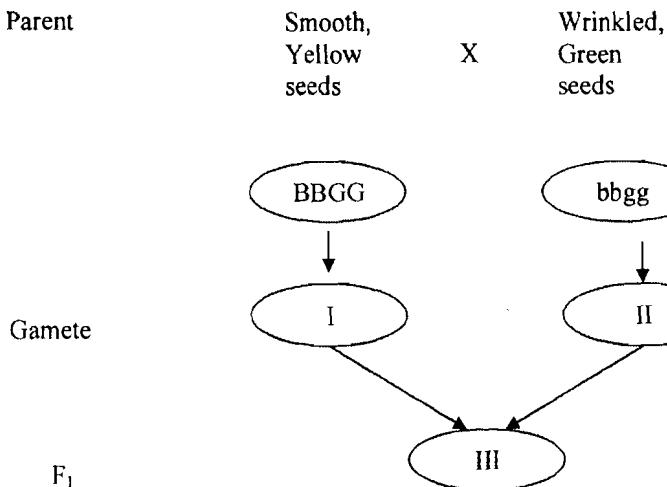


Diagram 23
Rajah 23

MOZ@C

Which of the following shows the correct genotypes for I, II and III ?

Yang manakah di antara berikut menunjukkan genotip yang betul untuk I, II dan III?

	I	II	III
A	BG	bg	BbGg
B	BB	Gg	BBgg
C	GG	Bb	bbGG
D	BG	Bg	BBGg

48. Diagram 24 shows the karyotype of an individual.

Rajah 24 menunjukkan kariotip seorang individu.

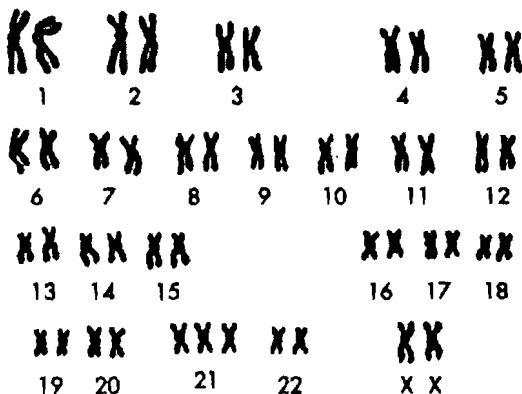


Diagram 24

Rajah 24

- Which of the following has the karyotype shown in Diagram 24?

Antara berikut yang manakah mempunyai kariotip seperti yang ditunjukkan dalam Rajah 24?

- A A male with Down's syndrome
Seorang lelaki dengan sindrom Down
- B A female with Down's syndrome
Seorang perempuan dengan sindrom Down
- C A normal male
Lelaki yang normal
- D A normal female
Perempuan yang normal

49. Diagram 25 shows a pair of identical twins. Which of the following caused the difference in their heights?

Rajah 25 menunjukkan sepasang kembar seiras. Antara yang berikut, yang manakah menyebabkan perbezaan antara tinggi mereka?



Diagram 25
Rajah 25

- A** Genetic factors
Factor genetik
- B** Environmental factors
Faktor persekitaran
- C** Random fertilization
Persenyawaan secara rawak
- D** Crossing over during meiosis
Pindah silang semasa meiosis

50. Diagram 26 shows a type of variation in humans. Which of the following is represented by the bar chart?

Carta bar menunjukkan sejenis variasi dalam manusia. Antara berikut, yang manakah diwakili oleh carta bar ini?

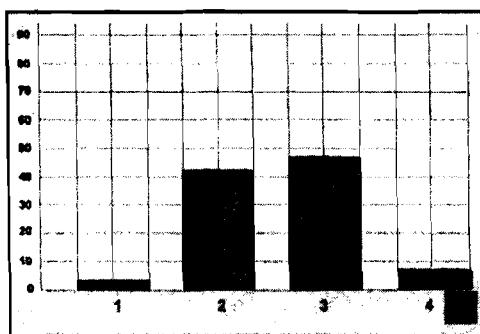


Diagram 26

Rajah 26

- A Height
Tinggi
- B Blood group
Kumpulan darah
- C Skin colour
Warna kulit
- D Ability to roll the tongue
Kebolehan menggulung lidah

END OF QUESTION PAPER

BIOLOGY FINAL YEAR EXAM OF YEAR 2008
PAPER 1
ANSWER SCHEME

NO.	Answer
1	B
2	C
3	B
4	A
5	D
6	B
7	B
8	C
9	D
10	A
11	B
12	C
13	C
14	B
15	A
16	C
17	A
18	C
19	A
20	B
21	B
22	C
23	D
24	A
25	D

No.	Answer
26	C
27	A
28	B
29	D
30	C
31	A
32	B
33	B
34	A
35	D
36	C
37	C
38	C
39	C
40	A
41	D
42	B
43	B
44	B
45	D
46	D
47	A
48	B
49	B
50	B