

PRAKTIS BIOLOGI 4551/1 SET 2

1. Rajah 1 menunjukkan satu bekas sisa biobahaya.
Diagram 1 shows a biohazard waste bin.

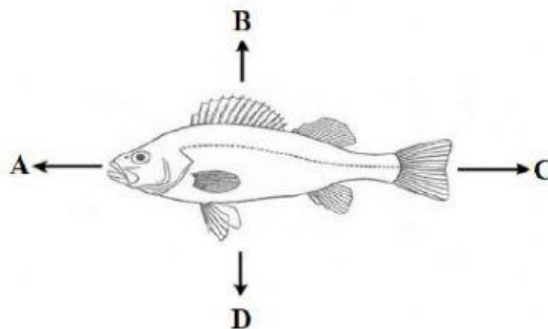


Rajah 1
Diagram 1

Apakah contoh sisa buangan yang sepatutnya dibuang ke dalam bekas sisa biobahaya ini?
What is the example of waste that should be disposed of in this biohazard waste bin?

- A Bingkai haiwan
Animal carcasses
- B Kultur kaldu
Broth culture
- C Picagari
Syringe
- D Pelitup muka
Mask

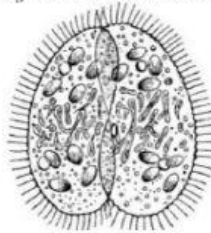
2. Rajah 2 menunjukkan seekor ikan.
Diagram 2 shows a fish.



Rajah 2
Diagram 2

Antara arah A, B, C atau D, yang manakah menunjukkan dorsal?
Which of the direction, A, B, C or D, shows dorsal?

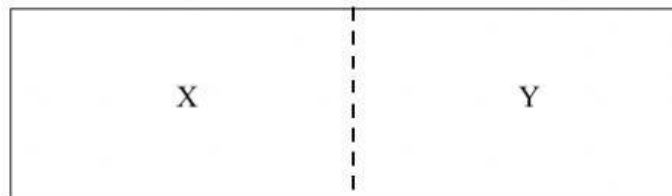
3. Rajah 3 menunjukkan proses pembiakan satu *Paramecium* sp.
 Diagram 3 shows reproduction process of a *Paramecium* sp.



Rajah 3
 Diagram 3

Apakah kaedah pembiakan yang dijalankan oleh *Paramecium* sp. ini?
 What is the method of reproduction carried out by this *Paramecium* sp.?

- A Pembentukan spora
Spore formation
 - B Belahan dedua
Binary fission
 - C Konjugasi
Conjugation
 - D Pertunasan
Budding
4. Rajah 4 menunjukkan dua larutan, X dan Y, yang dipisahkan oleh membran telap memilih.
 Diagram 4 shows two solutions, X and Y, that are separated by a selectively permeable membrane.



Rajah 4
 Diagram 4

Yang manakah antara kombinasi larutan berikut akan menyebabkan pergerakan glukosa yang paling cepat dari Y ke X?

Which combination of solutions would result in the fastest movement of glucose from Y to X?

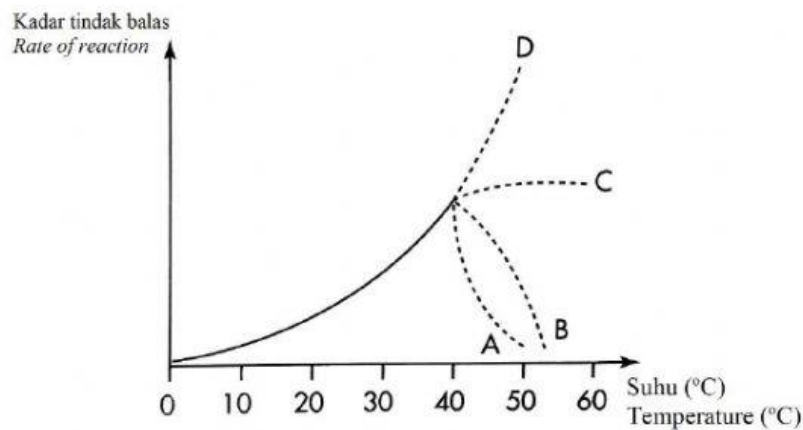
	X	Y
A	0.2 mol dm ⁻³ larutan glukosa 0.2 mol dm ⁻³ glucose solution	0.5 mol dm ⁻³ larutan glukosa 0.5 mol dm ⁻³ glucose solution
B	0.7 mol dm ⁻³ larutan glukosa 0.7 mol dm ⁻³ glucose solution	0.4 mol dm ⁻³ larutan glukosa 0.4 mol dm ⁻³ glucose solution
C	0.9 mol dm ⁻³ larutan glukosa 0.9 mol dm ⁻³ glucose solution	0.4 mol dm ⁻³ larutan glukosa 0.4 mol dm ⁻³ glucose solution
D	0.4 mol dm ⁻³ larutan glukosa 0.4 mol dm ⁻³ glucose solution	0.9 mol dm ⁻³ larutan glukosa 0.9 mol dm ⁻³ glucose solution

5. Yang manakah antara molekul berikut mungkin meresap dengan paling cepat melalui air?
Which of the following molecule will probably diffuse the fastest through water?

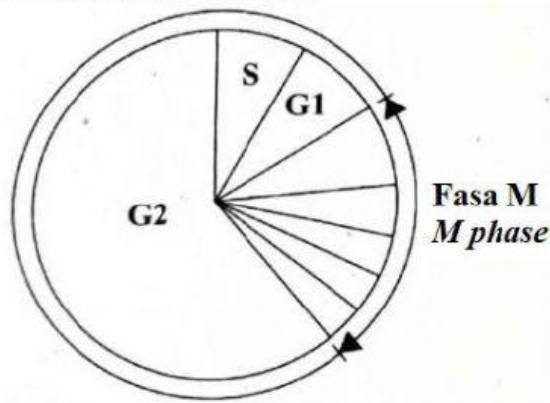
- A Metanol (CH_3OH)
Methanol (CH_3OH)
- B Etanol ($\text{CH}_3\text{CH}_2\text{OH}$)
Ethanol ($\text{CH}_3\text{CH}_2\text{OH}$)
- C Propanol ($\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$)
Propanol ($\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$)
- D Butanol ($\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$)
Butanol ($\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$)

6. Suatu enzim ditemui dalam satu spesies bakteria yang biasa dijumpai di mata air panas. Sel bakteria ini boleh hidup dalam suhu persekitaran sehingga 150°C . Graf yang manakah yang berkemungkinan besar menunjukkan aktiviti enzim yang melebihi 40°C ?

An enzyme was discovered in a species of bacteria typically found in the hot springs. These bacteria cells could survive in an environment temperature up to 150°C . Which graph would most likely show the enzyme activity beyond 40°C ?



7. Rajah 5 menunjukkan fasa dalam kitar sel.
Diagram 5 shows phases of a cell cycle.

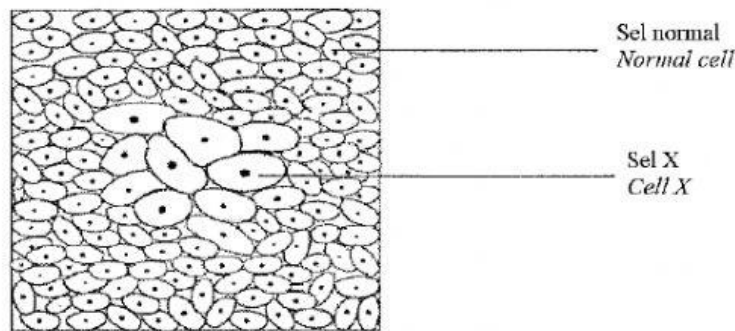


Rajah 5
Diagram 5

Antara yang berikut, yang manakah betul tentang fasa G1 dalam kitar sel?
Which of the following is correct about the G1 phase in the cell cycle?

- A Sintesis organel
Synthesis of organelle
- B Replikasi DNA
DNA replication
- C Penghasilan ATP
ATP production
- D Pembahagian nucleus
Nuclear division

8. Rajah 6 menunjukkan sel-sel kulit pada seorang pesakit yang menjalani rawatan. Sel X adalah sel kanser yang terbentuk selepas sel-sel normal terdedah kepada karsinogen.
Diagram 6 shows skin cells in a patient undergoing treatment. Cells X are cancerous cells which are formed after the normal cells are exposed to carcinogen.



Rajah 6
 Diagram 6

Antara berikut, yang manakah kemungkinan cara-cara untuk mengelakkan perkembangan sel X?

Which of the following are possible ways to prevent the development of cells X?

- I Berjemur
Sunbath
 - II Senaman
Exercise
 - III Radioterapi
Radiotherapy
 - IV Pengambilan melamin
Taking in melamines
- A I dan II
I and II
 - B I dan IV
I and IV
 - C II dan III
II and III
 - D III dan IV
III and IV

9. Rajah 7 menunjukkan sejenis organel yang terdapat dalam sel otot. Tindak balas biokimia berlaku dalam organel tersebut.

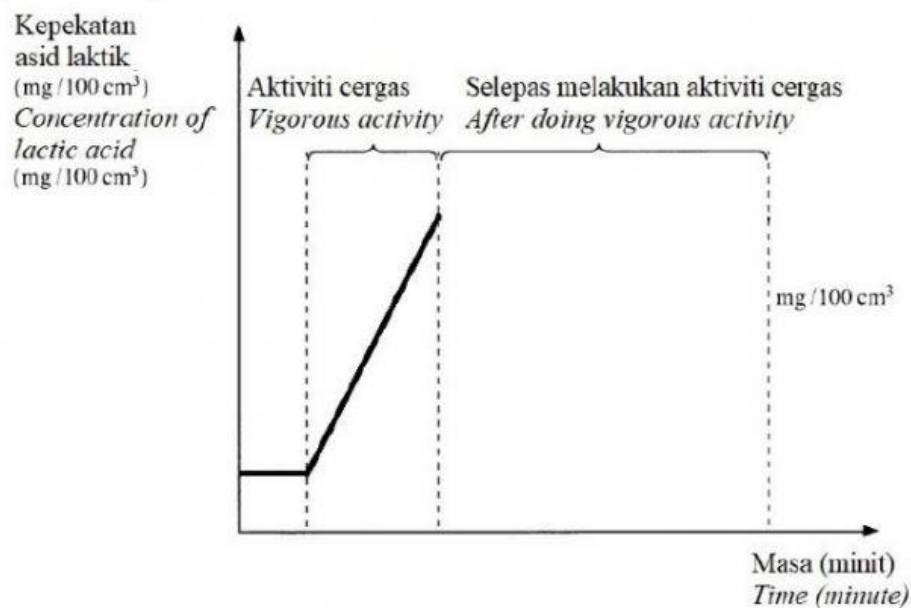
Diagram 7 shows a type of organelle found in muscle cells. A biochemical reaction occurs in the organelle.



Rajah 7
Diagram 7

Apakah tindak balas biokimia yang berlaku di X?
What is the biochemical reaction happening at the X?

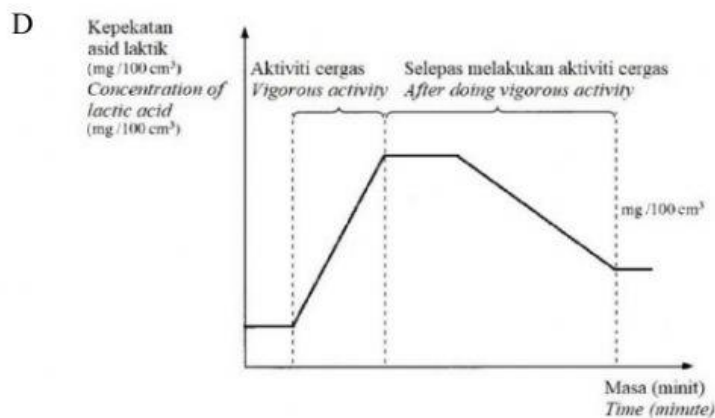
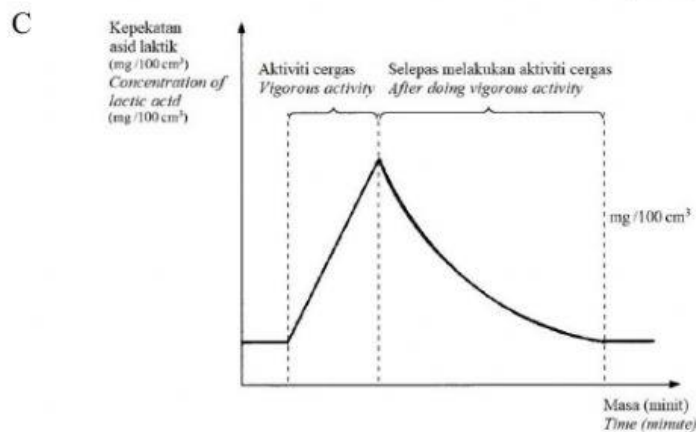
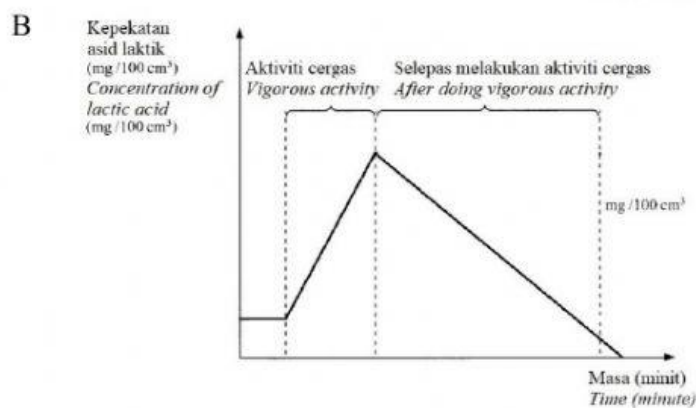
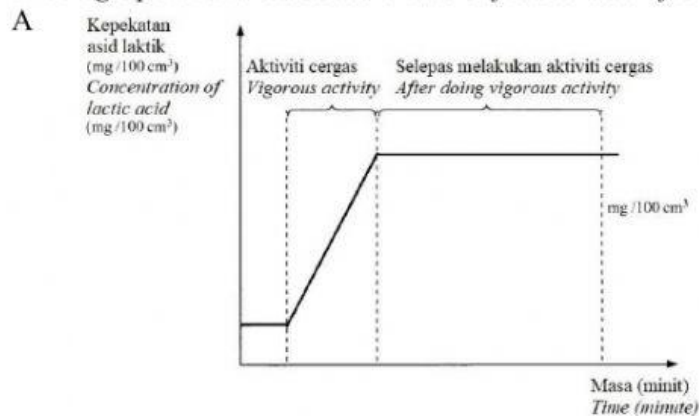
- A Glikolisis
Glycolysis
 - B Respirasi aerob
Aerobic respiration
 - C Penghasilan glukosa
Production of glucose
 - D Pengoksidaan piruvat
Oxidation of pyruvate
10. Rajah 8 menunjukkan kepekatan asid laktik dalam darah seorang atlet semasa aktiviti cergas.
Diagram 8 shows the concentration of lactic acid in the blood of an athlete during vigorous activity.



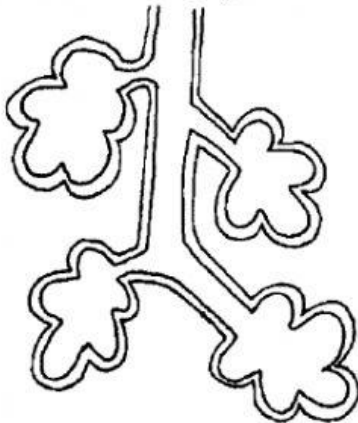
Rajah 8
Diagram 8

Graf yang manakah menunjukkan kepekatan asid laktik selepas melakukan aktiviti cergas?

Which graph shows the concentration of lactic acid after doing vigorous activity?

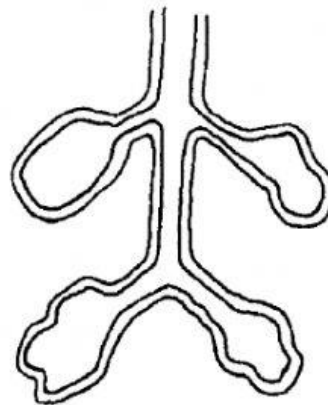


11. Rajah 9.1 menunjukkan alveolus individu yang sihat. Rajah 9.2 menunjukkan alveolus individu yang menghidap emfisema.
Diagram 9.1 shows alveoli of a healthy individual. Diagram 9.2 shows alveoli of an individual with emphysema.



Alveolus individu yang sihat
Alveolus of a healthy individual

Rajah 9.1
Diagram 9.1



Alevolus individu yang menghidap emfisema
Alveolus of an individual with emphysema

Rajah 9.2
Diagram 9.2

Antara pernyataan berikut, yang manakah paling sesuai menerangkan kesan penyakit emfisema kepada kesihatan individu itu?

Which of the following statement is the most suitable to explain the effects of the emphysema to the health of the individual?

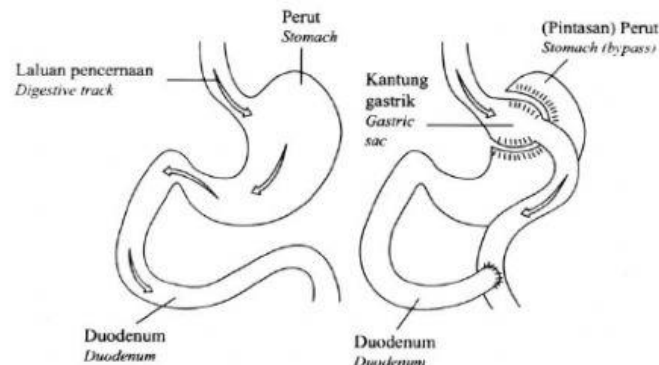
- A Jumlah luas permukaan alveolus yang kecil menyebabkan kurang oksigen meresap dari alveolus ke dalam kapilari darah.
The total surface area of alveolus become smaller causes less oxygen diffuses from alveolus into the blood capillaries.
- B Dinding alveolus di antara pundi udara menjadi elastik menyebabkan pernafasan menjadi kurang cekap.
The alveolus walls between the air sacs become elastic cause the breathing become less efficient.
- C Keradangan bronkiol mengurangkan pengaliran udara mengakibatkan kesukaran bernafas.
Inflamed bronchiole reduces the air flow that leads to breathing difficulty.
- D Size alveolus bertambah dan menjadi elastik menyebabkan pertukaran gas berkurang.
The size of alveolus increases and it becomes elastic that cause gaseous exchange becomes less .

12. Maklumat berikut adalah tentang ciri satu sistem dalam organisma multisel.
The following information describes the features of a system in a multicellular organism.

- Terdiri daripada salur yang panjang dan berotot
Made up of a long and muscular canal
- Pankreas merembeskan tripsin ke dalam salur
Pancreas secretes trypsin into the canal
- Pengambilan melalui mulut dan pembuangan sisa melalui anus
Ingestion through mouth and elimination of waste through anus

Antara sistem berikut yang manakah mempunyai ciri seperti di atas?
Which of the following system has the features as stated above?

- A Sistem otot
Muscular system
- B Sistem limfa
Lymphatic system
- C Sistem endokrin
Endocrine system
- D Sistem pencernaan
Digestive system
13. Rajah 10 menunjukkan perut seorang individu yang telah menjalani pembedahan pintasan gaster sebagai alternatif untuk mengurangkan berat badan.
Diagram 10 shows the stomach of an individual that undergone a gastric bypass surgery as alternative to reduce his body weight.



Rajah 10
 Diagram 10

Apakah kesan selepas prosedur pembedahan yang dilakukan terhadap beliau?
What is effect after the surgical procedure is done on him?

- A Mengurangkan pengambilan makanan
Reduce the intake of food
- B Meningkatkan kandungan insulin dalam darah
Increase the amount of insulin in blood
- C Meningkatkan risiko serangan jantung
Increase the risk of heart attack
- D Meningkatkan penyerapan nutrien di dalam usus kecil
Increase the absorption of nutrients in the small intestine