

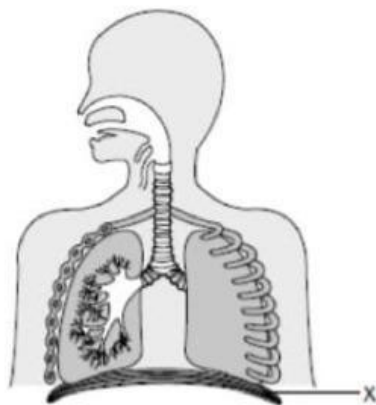
1. Which of the following pollutants does **not** causes respiratory problems?
Antara bahan pencemar berikut, yang manakah **tidak** menyebabkan masalah pernafasan?

- ☐ A Cigarette smoke
Asap rokok
- ☐ B Tar
Tar
- ☐ C Nitrogen
Nitrogen
- ☐ D Carbon dioxide
Karbon dioksida

2. Which of the following cells control the opening and closing of stomatal pore?
Antara sel berikut, yang manakah mengawal pembukaan dan penutupan liang stoma?

- ☐ A Guard cells
Sel pengawal
- ☐ B Epidermal cells
Sel epidermis
- ☐ C Spongy mesophyll cell
Sel mesofil berspan
- ☐ D Mesophyll palisade cell
Sel mesofil palisad

3. The diagram below shows the structure of the human respiratory system.
Rajah di bawah menunjukkan struktur sistem respirasi manusia.



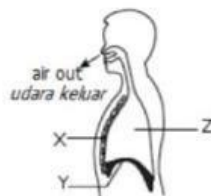
What is the importance of the part labelled X?
Apakah kepentingan bahagian berlabel X?

- ☐ A Lowers the rib cage
Menurunkan sangkar rusuk
- ☐ B Controls the volume of the thoracic cavity
Mengawal isi padu rongga toraks
- ☐ C Pushes the blood into the heart
Menolak darah masuk ke jantung
- ☐ D Pushes the rib cage to move upwards
Menolak sangkar rusuk bergerak ke atas

4. Which of the following will cause the exchange of gases between the alveoli and the blood capillaries to take place with the lowest efficiency?
 Antara yang berikut, yang manakah akan menyebabkan pertukaran gas antara alveolus dan kapilari darah berlaku dengan kecekapan yang paling rendah?

- ☐ A
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thin
Nipis | Moist
Lembap | Many
Banyak |
- ☐ B
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thin
Nipis | Dry
Kering | A few
Sedikit |
- ☐ C
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thick
Tebal | Moist
Lembap | Many
Banyak |
- ☐ D
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thick
Tebal | Dry
Kering | A few
Sedikit |

5. The diagram below shows the exhalation mechanism.
 Rajah di bawah menunjukkan mekanisme menghembus nafas.



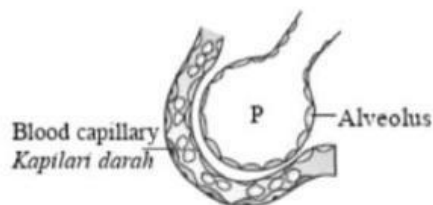
- Which of the following is correct about the parts labelled X, Y and Z during the process?
 Antara yang berikut, yang manakah betul tentang bahagian berlabel X, Y, dan Z semasa proses itu?

- ☐ A
- | X | Y | Z |
|-----------------------------------|----------------------|--------------------------------------|
| Moves upwards
Bergerak ke atas | Relaxes
Mengendur | Become bigger
Menjadi lebih besar |
- ☐ B
- | X | Y | Z |
|--------------------------------------|-----------------------|--|
| Moves downwards
Bergerak ke bawah | Contracts
Mengecut | Becomes smaller
Menjadi lebih kecil |
- ☐ C
- | X | Y | Z |
|-----------------------------------|-----------------------|--------------------------------------|
| Moves upwards
Bergerak ke atas | Contracts
Mengecut | Become bigger
Menjadi lebih besar |
- ☐ D
- | X | Y | Z |
|--------------------------------------|----------------------|--|
| Moves downwards
Bergerak ke bawah | Relaxes
Mengendur | Becomes smaller
Menjadi lebih kecil |

6. Which of the following diseases is **not** caused by cigarette smoke?
Antara penyakit berikut, yang manakah **bukan** disebabkan oleh asap rokok?

- ☐ A Bronchitis
Bronkitis
- ☐ B Emphysema
Emfisema
- ☐ C Lung cancer
Kanser peparu
- ☐ D Silicosis
Silikosis

7. The diagram below shows a section of an alveolus and its blood supply in the human lung.
Rajah di bawah menunjukkan keratan rentas alveolus manusia dan jalinan kapilari dalam peparu manusia.

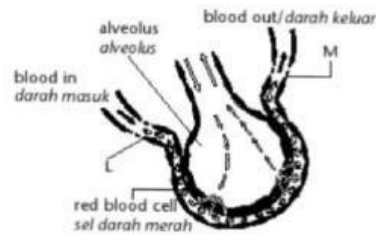


Which of the following occur at the alveolus during inhalation?
Antara yang berikut, yang manakah berlaku pada alveolus semasa menarik nafas?

- I A lot of oxyhaemoglobin are formed
Banyak oksihemoglobin terbentuk
- II The gaseous exchange occurs by simple diffusion
Pertukaran gas berlaku secara resapan ringkas
- III The concentration of oxygen in P is lower than the concentration of oxygen in the blood capillaries
Kepekatan oksigen di P lebih rendah daripada kepekatan oksigen dalam kapilari darah
- IV The concentration of oxygen in P is higher than the concentration of oxygen in the blood capillaries
Kepekatan oksigen di P lebih tinggi daripada kepekatan oksigen dalam kapilari darah

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

8. The diagram below shows blood vessel L which brings blood to the alveolus and blood vessel M which takes blood from it.
 Rajah di bawah menunjukkan salur darah L yang membawa darah ke alveolus dan salur darah M yang membawa darah darinya.



Which of the following shows the correct gas content in the two blood vessels?
 Antara yang berikut, yang manakah menunjukkan kandungan gas yang betul dalam dua salur darah itu?

- ☐ A
- | Blood vessel L
Salur darah L | Blood vessel M
Salur darah M |
|---|---|
| High oxygen content
Kandungan oksigen tinggi | High carbon dioxide content
Kandungan karbon dioksida tinggi |
- ☐ B
- | Blood vessel L
Salur darah L | Blood vessel M
Salur darah M |
|---|---|
| High carbon dioxide content
Kandungan karbon dioksida tinggi | High oxygen content
Kandungan oksigen tinggi |
- ☐ C
- | Blood vessel L
Salur darah L | Blood vessel M
Salur darah M |
|---|--|
| High oxygen content
Kandungan oksigen tinggi | Low carbon dioxide content
Kandungan karbon dioksida rendah |
- ☐ D
- | Blood vessel L
Salur darah L | Blood vessel M
Salur darah M |
|---|--|
| High carbon dioxide content
Kandungan karbon dioksida tinggi | Low oxygen content
Kandungan oksigen rendah |

9. Which of the following is **not** a respiratory disease?
 Antara yang berikut, yang manakah **bukan** penyakit respiratori?

- ☐ A Bronchitis
Bronkitis
- ☐ B Lung cancer
Kanser paru
- ☐ C Emphysema
Emfisema
- ☐ D Diabetes
Kencing manis

10.

"Caused by allergies, wheezing, coughing, excessive phlegm, difficulty in breathing"
 "Disebabkan oleh alahan, semput, batuk, kahak berlebihan, kesukaran bernafas"

Which of the following respiratory diseases shows the symptoms above?
 Antara penyakit respirasi berikut, yang manakah menunjukkan gejala-gejala di atas?

- ☐ A Asthma
Asma
- ☐ B Pneumonia
Pneumonia
- ☐ C Emphysema
Emfisema
- ☐ D Lung cancer
Kanser paru

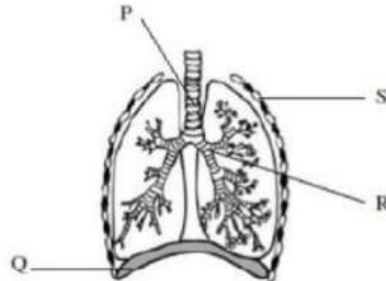
11. Which of the following process uses oxygen and releases carbon dioxide?
Antara proses berikut, yang manakah menggunakan oksigen dan membebaskan karbon dioksida?

- ☐ A Transpiration
Transpirasi
- ☐ B Evaporation
Penyejatan
- ☐ C Respiration
Respirasi
- ☐ D Photosynthesis
Fotosintesis

12. Which of the following causes closing of the stomata at night?
Antara yang berikut, yang manakah menyebabkan penutupan stoma pada waktu malam?

- ☐ A The guard cells carry out photosynthesis.
Sel pengawal menjalankan fotosintesis.
- ☐ B The guard cells become turgid and bent.
Sel pengawal menjadi segah dan membengkok.
- ☐ C Water diffuses into the guard cells by osmosis.
Air meresap masuk ke dalam sel pengawal secara osmosis.
- ☐ D The concentration of glucose in the guard cells decreases.
Kepekatan glukosa di dalam sel pengawal berkurang.

13. The diagram below shows the human respiratory system.
Rajah di bawah menunjukkan sistem respirasi manusia.



P – Trachea
Trakea
Q – Diaphragm
Diafragma
R – Bronchus
Bronkus
S – Pharynx
Farinks

Which of the parts are correctly labelled?
Bahagian yang manakah dilabelkan dengan betul?

- ☐ A P and Q
P dan Q
- ☐ B R and S
R dan S
- ☐ C P, Q and R
P, Q dan R
- ☐ D P, Q, R and S
P, Q, R dan S

14. How do salamanders breathe?
Bagaimanakah salamander bernafas?



- ☐ A Through gills
Melalui insang
- ☐ B Through gills and lungs
Melalui insang dan peparu
- ☐ C Through lungs and skin
Melalui peparu dan kulit
- ☐ D Through gills, lungs and skin
Melalui insang, peparu dan kulit

15. Which of the following characteristics help gaseous exchange between the blood capillaries and the alveoli take place?

Antara ciri-ciri berikut, yang manakah membantu pertukaran gas yang berlaku antara kapilari darah dengan alveolus?

- ☐ A
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thick
Tebal | Dry
Kering | Many
Banyak |
- ☐ B
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thin
Nipis | Dry
Kering | A few
Sedikit |
- ☐ C
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thick
Tebal | Moist
Lembap | Moderate
Sederhana |
- ☐ D
- | Alveolar walls
Dinding alveolus | | Number of blood capillaries
Bilangan kapilari darah |
|------------------------------------|----------------------|--|
| Thickness
Ketebalan | Condition
Keadaan | |
| Thin
Nipis | Moist
Lembap | Many
Banyak |

16. Where does the gaseous exchange in plants take place?
Di manakah pertukaran gas dalam tumbuhan berlaku?

- ☐ A Cuticle
Kutikel
- ☐ B Stoma
Stoma
- ☐ C Chloroplast
Kloroplas
- ☐ D Upper epidermis
Epidermis atas

17. Tobacco smoke is the most important risk factor for the following diseases except..
Asap tembakau adalah faktor risiko yang paling penting bagi penyakit berikut kecuali...

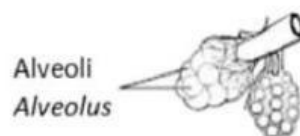
- ☐ A asthma.
asma.
- ☐ B pneumonia.
pneumonia.
- ☐ C diabetes.
kencing manis.
- ☐ D emphysema.
emfisema.

18. Which of the following about the transportation of oxygen from the alveoli into the blood capillaries is **incorrect**?

*Antara yang berikut, yang manakah **tidak** betul tentang pengangkutan oksigen dari alveolus ke dalam kapilari darah?*

- ☐ A The moist surfaces of the alveoli help to dissolve oxygen.
Permukaan lembap alveolus membantu melarutkan oksigen.
- ☐ B The concentration of oxygen in the alveoli increases.
Kepekatan oksigen dalam alveolus meningkat.
- ☐ C Oxygen is transported from the alveoli into the blood capillaries by simple diffusion.
Oksigen diangkut dari alveolus ke dalam kapilari darah secara resapan ringkas.
- ☐ D The number of red blood cells in the capillaries increases.
Bilangan sel darah merah dalam kapilari meningkat.

19. The diagram below shows the structure of alveoli.
Rajah di bawah menunjukkan struktur alveolus.

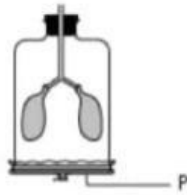


Which of the following does **not** occur at the alveoli?

*Antara yang berikut, yang manakah **tidak** berlaku pada alveolus?*

- ☐ A Food is oxidised to release energy
Makanan dioksidakan untuk membebaskan tenaga
- ☐ B Oxygen dissolves into the blood capillaries
Oksigen melarut ke dalam kapilari darah
- ☐ C Carbon dioxide diffuses from the blood capillaries into the alveoli
Karbon dioksida meresap dari kapilari darah ke dalam alveolus
- ☐ D Oxygen binds with haemoglobin to form oxyhaemoglobin
Oksigen bergabung dengan hemoglobin untuk membentuk oksihemoglobin

20. The diagram below shows a model of the human respiratory system.
Rajah di bawah ialah model sistem respirasi manusia.



What will happen when the part labelled P is pulled downwards?
Apakah yang akan berlaku apabila bahagian berlabel P ditarik ke bawah?

- ☐ A The balloons contract.
Belon-belon itu mengecut.
- ☐ B Air is forced out from the balloons.
Udara dikeluarkan dari belon.
- ☐ C The volume of the bell jar decreases.
Isi padu balang loceng berkurang.
- ☐ D The air pressure inside the bell jar decreases.
Tekanan udara dalam balang loceng berkurang.