

STUDENT'S
COPY

DIAGNOSTIC TEST

(UJIAN DIAGNOSTIK)

PPSMI

SCIENCE

FORM 3

MODULE 1

PPSMI

RESPIRATION



MINISTRY OF EDUCATION MALAYSIA

SCIENCE FORM 3

MODULE 1: RESPIRATION

Arahan:

1. Modul ini mengandungi **tiga puluh empat** soalan. Semua soalan adalah dalam bahasa Inggeris.
2. Modul merangkumi **enam** konstruk yang diuji
K1-Memahami soalan dalam Bahasa Inggeris
K3-Memahami istilah sains dalam Bahasa Inggeris
K5-Menguasai konstruk pengetahuan
K6-Menguasai konstruk kefahaman
K7-Menguasai konstruk kemahiran
K10-Memahami pengajaran dan pembelajaran dalam Bahasa Inggeris
3. Murid hendaklah menulis maklumat diri dalam kertas jawapan objektif disediakan. Murid juga perlu memastikan maklumat konstruk, nombor soalan dan jumlah soalan seperti yang dibaca oleh guru di dalam ruangan disediakan dalam kertas jawapan objektif sebelum ujian.
4. Bagi **soalan objektif**, anda perlu menandakan jawapan dengan **menghitamkan pilihan jawapan** pada pilihan jawapan **A** , **B** , **C** atau **D** pada kertas jawapan objektif.

Contoh:

Antara berikut, yang manakah haiwan?

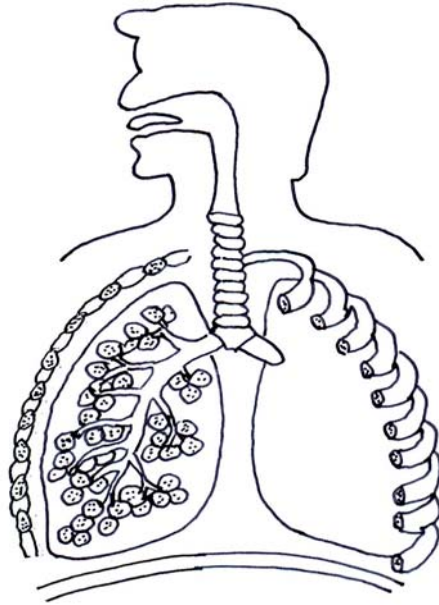
A. Pokok B. Kambing C. Kereta D. Pen

A B C D E

5. Untuk **soalan subjektif**, jawapan hendaklah **ditulis pada kertas berasingan** yang disediakan oleh guru.
6. Bagi soalan **29 - 34**, soalan dikemukakan secara lisan oleh guru manakala jawapan diberi secara bertulis oleh murid.
7. Jawab **semua** soalan.

Modul ini mengandungi **19** halaman bercetak

- 1 The figure shows the respiratory system



Which of the following is part of the respiratory system?

- A Kidney
 - B Stomach
 - C Lungs
 - D Heart
- 2 Inhalation and exhalation compliments each other.
During exhalation, the air pressure in our thoracic cavity is greater than the air pressure outside our body. When we inhale, the air pressure in the thoracic cavity is _____ than the air pressure outside the body.
- A more
 - B equal
 - C less

3 Oxyhaemoglobin is formed when haemoglobin combines with oxygen. Which of the following describes the above statement?

- A Oxygen reacts with haemoglobin
- B Oxygen joins with haemoglobin
- C Oxygen dissolves in haemoglobin
- D Oxygen separates from haemoglobin

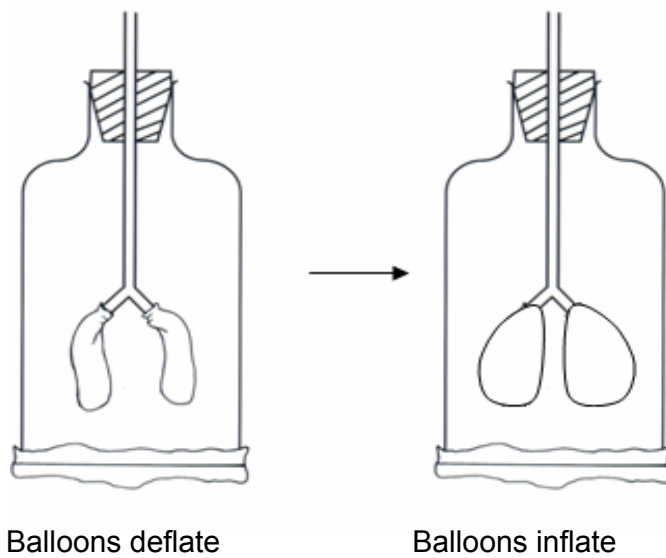
4

Gas exchange occurs in alveolus. Gases involved in the process are oxygen and carbon dioxide

Which gases are involved in gas exchange process?

- I Oxygen
 - II Carbon dioxide
 - III Nitrogen
-
- A I and II
 - B I and III
 - C II and III
 - D I, II and III

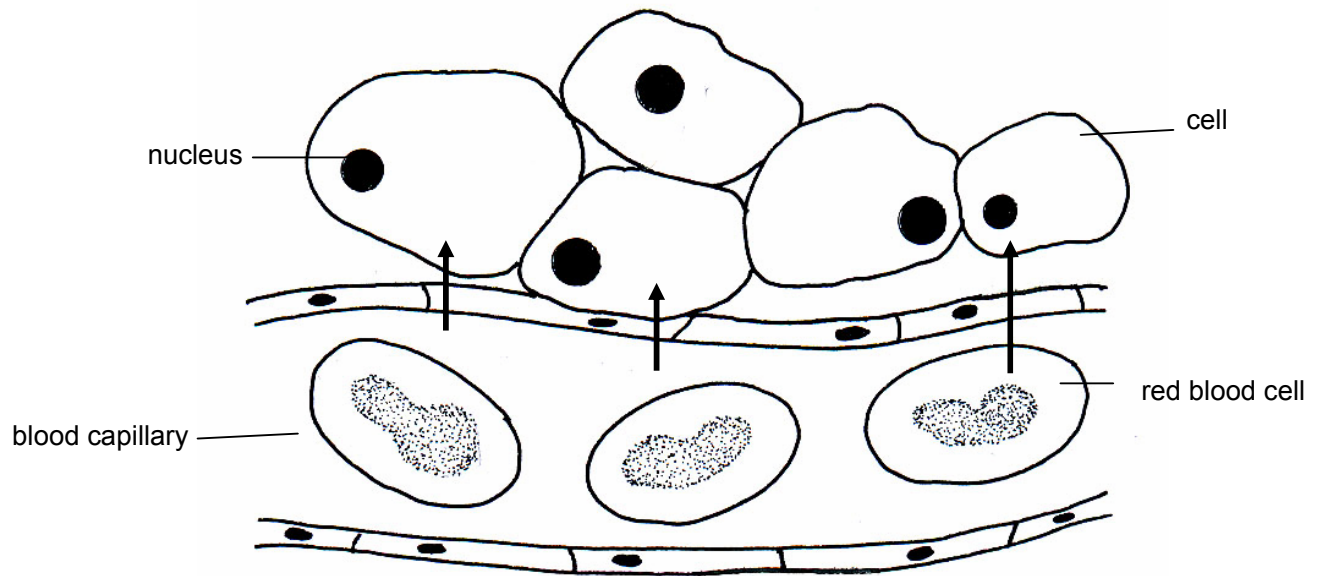
5 The figure shows the model of breathing mechanism



What is the process shown by the figure?

- A Inhalation
 - B Respiration
 - C Exhalation
 - D Diffusion
- 6 Nicotine and tar found in cigarette smoke can cause cancer. These substances are known as _____
- A detergent
 - B preservatives
 - C pollutant
 - D carcinogen

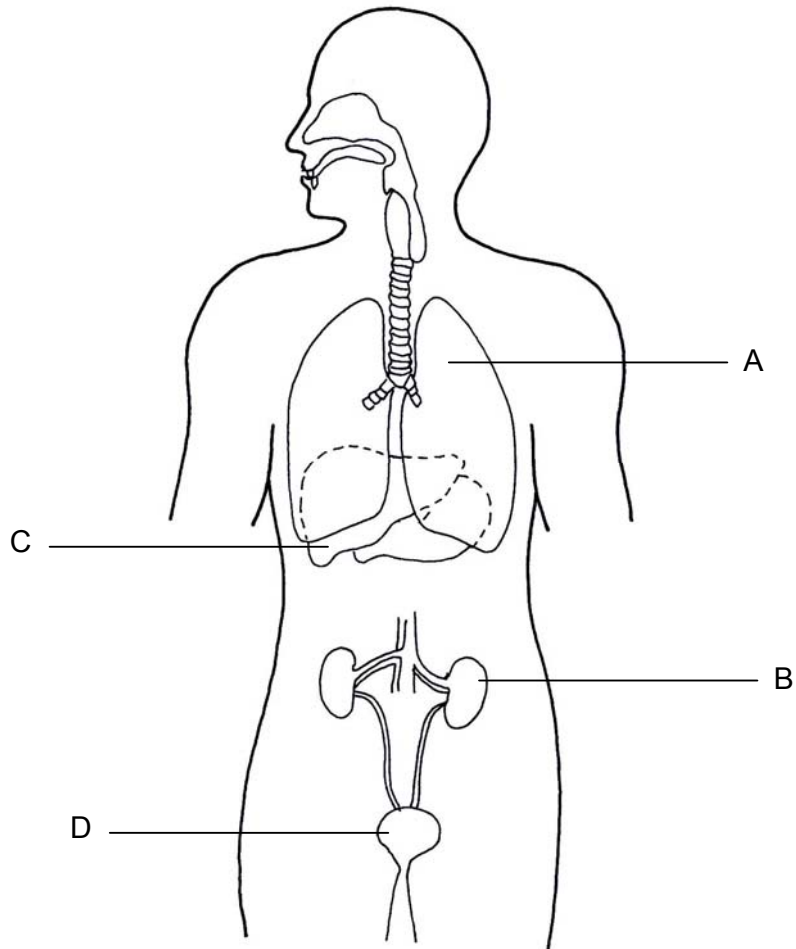
- 7 The figure shows the transportation of oxygen from blood capillary into the body cells



Name the process represented by the arrows

- A Combustion
 - B Respiration
 - C Diffusion
 - D Oxidation
- 8 The intake of air into the lungs is called _____
- A breathing
 - B inhaling
 - C exhaling
 - D respiring

9 The figure shows organs in human body.



Smoking will cause diseases in our respiratory system. Choose the organ which will be affected by smoking.

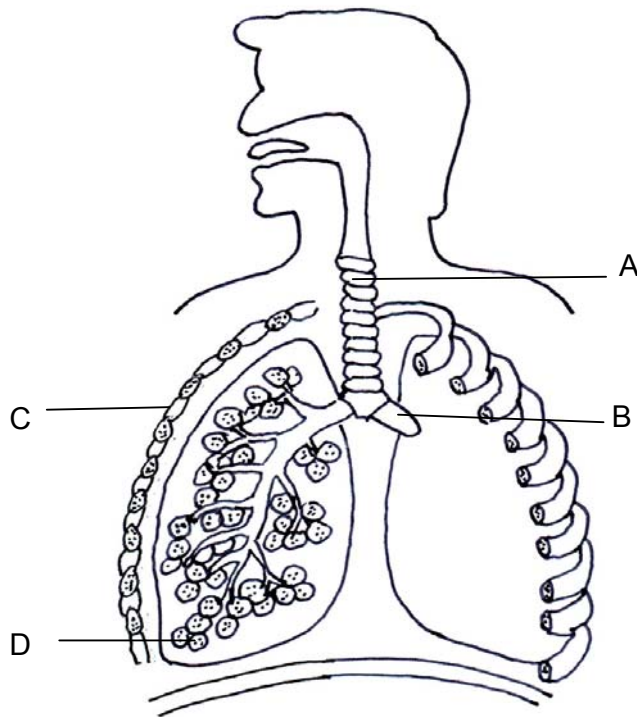
10 What is the system that enables us to breathe?

- A Circulatory
- B Respiratory
- C Excretory

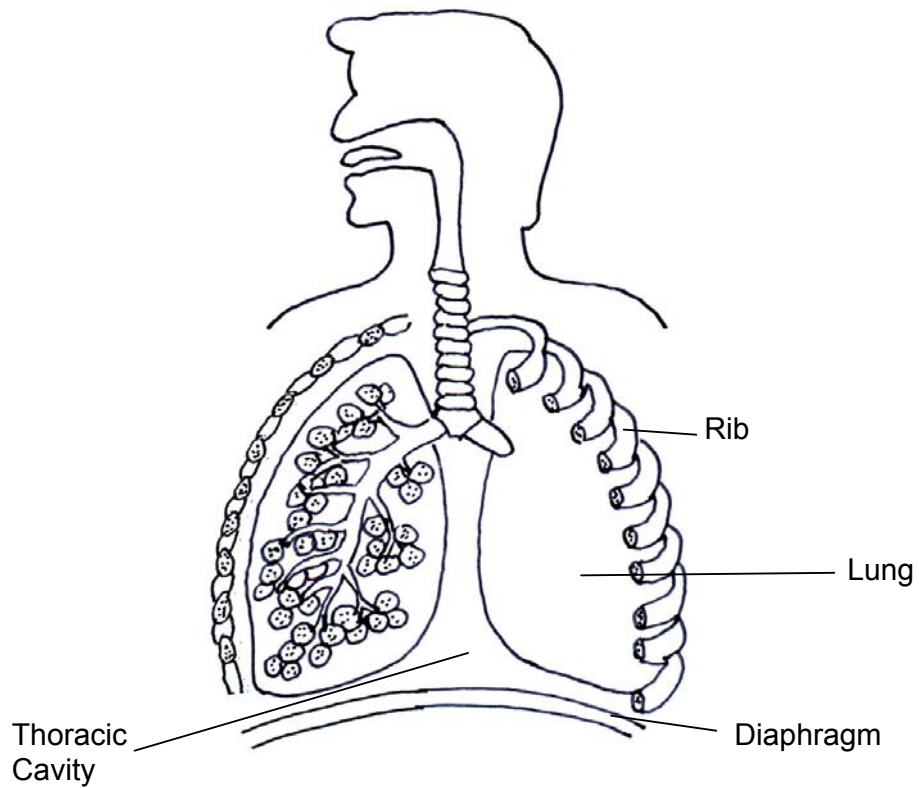
11 Name a gas in the air that diffuses into the blood capillaries from the alveolus.

- A Nitrogen
- B Carbon dioxide
- C Carbon monoxide
- D Oxygen

12 The figure shows a human respiratory system.
Which of the following parts represents the alveolus?



13 The figure shows a human respiratory system.



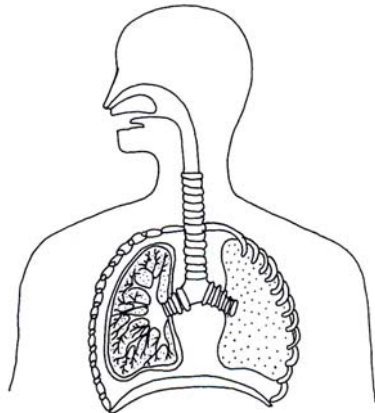
Which physical change does **not** occur during exhalation?

- A Thoracic cavity become smaller
- B Rib cage move downwards and inwards
- C Diaphragm moves up
- D Diaphragm moves down

- 14 During gaseous exchange, the oxygen and carbon dioxide pass through the wall of alveolus.
Which of the following are the possible characteristics of the wall of alveolus?

- I Thin
 - II Thick
 - III Dry
 - IV Moist
-
- A I and II
 - B I and III
 - C I and IV
 - D I, II and III

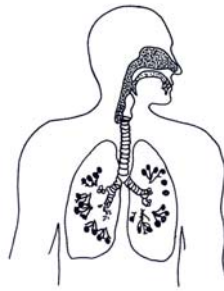
- 15 The figure shows a human respiratory system.



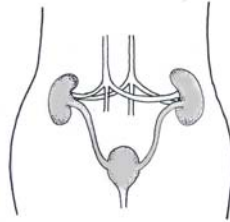
Which of the following are diseases that affect the human respiratory system?

- I Pneumonia
 - II Bronchitis
 - III Asthma
 - IV Hepatitis
-
- A I and II only
 - B II and IV only
 - C I, II and III
 - D I, III and IV

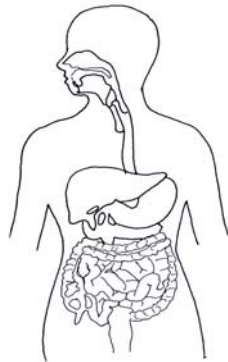
- 16 The figures show the systems found in a human body.
In which system does inhalation take place?



A



B



C



D

- 17 Which of the following are examples of harmful substances found in cigarette smoke?

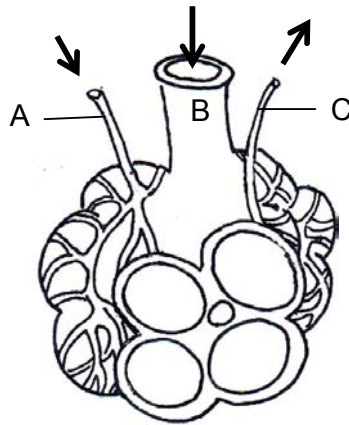
- I Carbon monoxide
- II Nicotine
- III Tar
- IV Sulphur dioxide

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

18 The alveolus wall is very thin to make it easier for _____

- A gas diffusion
- B gas absorption
- C blood absorption
- D blood diffusion

19 The figure shows the structure of alveolus in a lung.
At which vessel does the oxygenated blood flow?



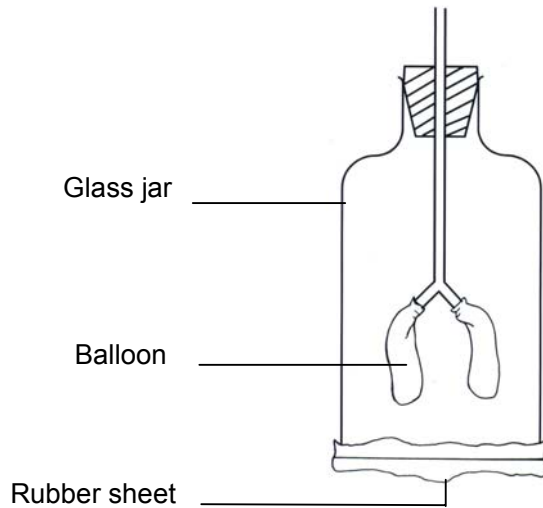
20 During gaseous exchange in the alveolus, the diffusion process involves _____

- I the flow of oxygen from the blood capillaries into the alveolus
- II the flow of carbon dioxide from the alveolus into the blood capillaries
- III the flow of oxygen from the alveolus into the blood capillaries
- IV the flow of carbon dioxide from the blood capillaries into the alveolus

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

- 21 Which of the following statements is **correct** about the breathing mechanism?
- A The air pressure in the lungs increases during inhalation
 - B The air pressure in the lungs decreases during exhalation
 - C The thoracic cavity becomes smaller during exhalation
 - D The thoracic cavity becomes smaller during inhalation
- 22 Which of the following is a factor which speeds up the gaseous exchange in the lungs?
- I There are thousands of alveoli in the lungs
 - II The total surface area of alveoli is small
 - III There is a rich network of capillaries in the alveoli
- A I and II only
 - B I and III only
 - C II and III only
 - D I, II and III

23 The figure shows the model of a respiratory system.



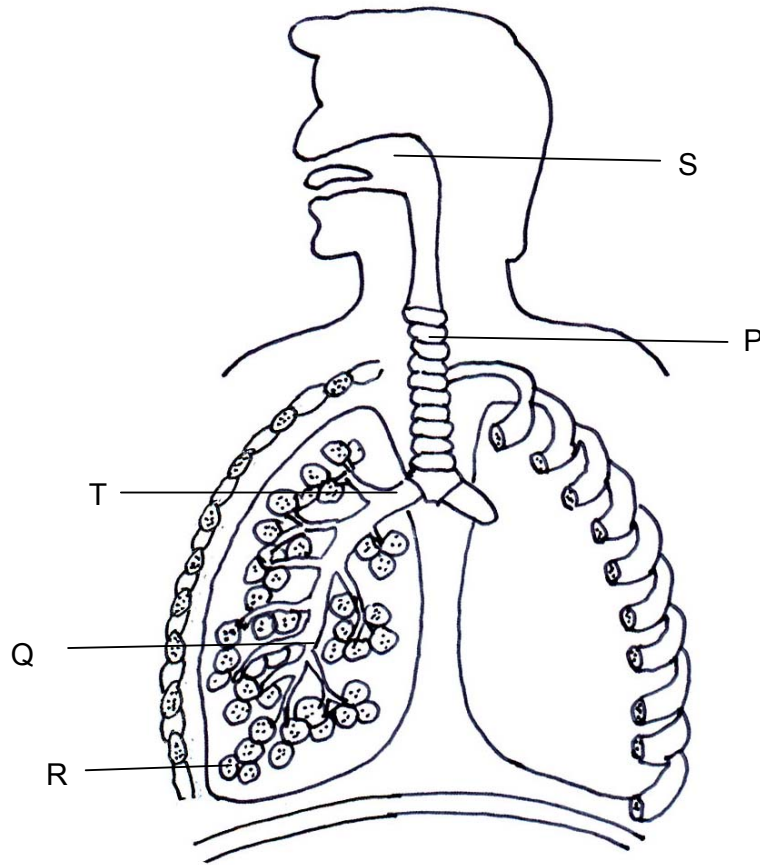
What will happen when the rubber sheet is pushed upward?

- I Both the balloons will deflate
 - II The air pressure in the glass jar will increase
 - III The density of the air in the glass jar will increase
-
- A I and II
 - B I and III
 - C II and III
 - D I, II and III

24 Which of the following shows the **correct** concentration of oxygen and carbon dioxide during inhalation?

	Concentration of oxygen	Concentration of carbon dioxide
A	Low	High
B	Low	Low
C	High	Low
D	High	Low

25 The figure shows a human respiratory system.



Which of the following represents the flow of air from the lungs to the atmosphere?

- A $R \rightarrow Q \rightarrow P \rightarrow T \rightarrow S$
- B $R \rightarrow Q \rightarrow T \rightarrow P \rightarrow S$
- C $S \rightarrow P \rightarrow T \rightarrow Q \rightarrow R$
- D $S \rightarrow T \rightarrow P \rightarrow Q \rightarrow R$

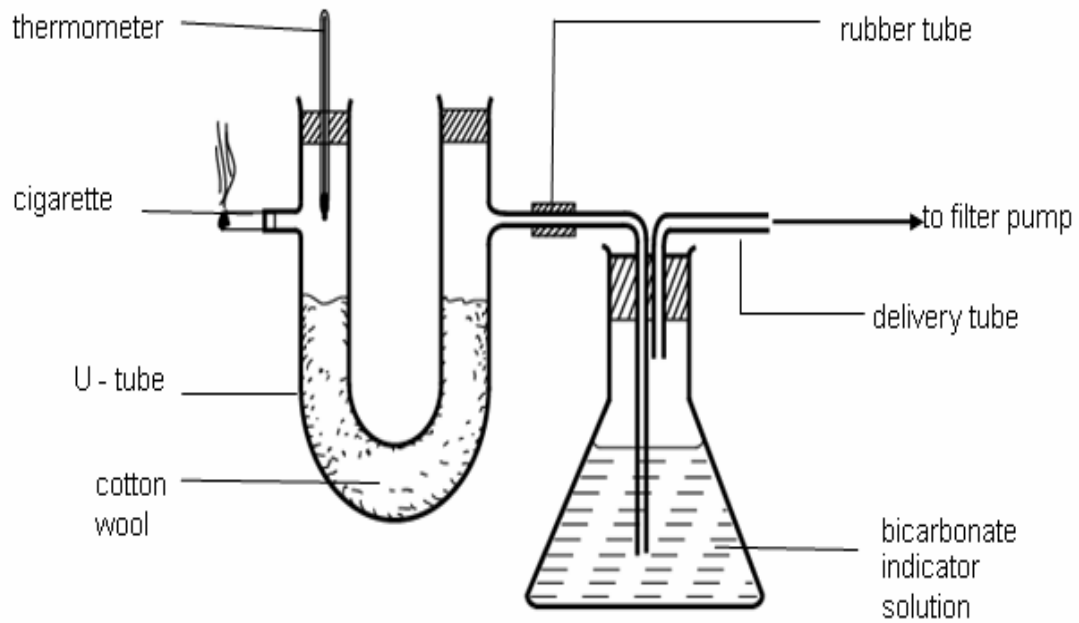
- 26 The table shows the comparison between inhalation and exhalation in breathing mechanism.

	Inhalation	Exhalation
I	Diaphragm moves down	Diaphragm moves up
II	Volume of the thoracic cavity increases	Volume of the thoracic cavity decreases
III	Air pressure in the thoracic cavity decreases	Air pressure in the thoracic cavity increases

Which of the following are **correct**?

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

- 27 The figure shows the apparatus set up to investigate the effects of smoking on the lungs.



Which of the following can be observed when the filter pump is switched on for 5 minutes?

- I The temperature in the thermometer rises
 - II The cotton wool will become brown
 - III The air pressure in the U-tube increases
 - IV The bicarbonate indicator turns yellow
-
- A I and II
 - B II and III
 - C I, II and IV
 - D II, III and IV

- 28 P, Q, R and S are the processes that take place when oxygen enters the blood capillaries.

P	The oxygen diffuses into the body cells
Q	Oxygen combines with haemoglobin in the red blood cells to form oxyhaemoglobin
R	Oxygenated blood is transported to the body cells
S	The oxygenated blood reaches the body cells, oxyhaemoglobin decomposes to release oxygen

Which of the following is the **correct** sequence of the processes?

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

Listen carefully to the text read by the teacher. Answer question 29 to 34.

- 29 Which of the statements is **correct**?

- I The breathing mechanism involves physical changes of the respiratory system
- II The breathing mechanism involves the chemical changes of the respiratory system
- III Physical changes in the respiratory system enable us to breathe
- IV Physical changes in the respiratory system enable us to reproduce

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

- 30 Based on the information above, which of the following statements is **correct**?
- A Inhalation is the process by which air is forced out of our lungs.
 - B Exhalation is the process by which air is forced into our lungs
 - C Inhalation is the process by which air is forced into our lungs
- 31 Choose the **correct** statement.
- I The wall of alveolus is only one cell thick
 - II The wall of blood capillary is only one cell thick
 - III The wall of alveolus is thick
 - IV The wall of blood capillary is thick
- A I and II only
 - B II and III only
 - C I and IV only
 - D I, II, III and IV
- 32 How many ways are there to improve the air quality?
- A Less than four
 - B More than four
 - C Equal to four
- 33 Choose the **correct** statement.
- A Only cigarette smoke is harmful to the respiratory system
 - B Burning of fossil fuels harms the respiratory system
 - C Smoke from the vehicles does not harm the respiratory system
- 34 Diseases that can be prevented by not smoking are _____
- A bronchitis and asthma
 - B emphysema and pneumonia
 - C lung cancer and bronchitis
 - D asthma and influenza



KEMENTERIAN PELAJARAN MALAYSIA
KERTAS JAWAPAN OBJEKTIF
Ujian Diagnostik



Nama Pelajar:

Tahun/ Tingkatan : 3 Mata Pelajaran: SAINS

Nama Sekolah: Modul: 1

GUNAKAN PENSIL 2B ATAU BB SAHAJA.
TENTUKAN TIAP-TIAP TANDA ITU HITAM DAN MEMENUHI KESELURUHAN RUANG.
PADAMKAN HINGGA HABIS MANA-MANA TANDA YANG ANDA UBAH
SILA HITAMKAN JAWAPAN DI BAWAH MENGIKUT HURUF JAWAPAN YANG ANDA PILIH

- | | | | | | |
|----|---------------------|----|---------------------|----|---------------------|
| 1 | (A) (B) (C) (D) (E) | 31 | (A) (B) (C) (D) (E) | 46 | (A) (B) (C) (D) (E) |
| 2 | (A) (B) (C) (D) (E) | 32 | (A) (B) (C) (D) (E) | 47 | (A) (B) (C) (D) (E) |
| 3 | (A) (B) (C) (D) (E) | 33 | (A) (B) (C) (D) (E) | 48 | (A) (B) (C) (D) (E) |
| 4 | (A) (B) (C) (D) (E) | 34 | (A) (B) (C) (D) (E) | 49 | (A) (B) (C) (D) (E) |
| 5 | (A) (B) (C) (D) (E) | 35 | (A) (B) (C) (D) (E) | 50 | (A) (B) (C) (D) (E) |
| 6 | (A) (B) (C) (D) (E) | 36 | (A) (B) (C) (D) (E) | 51 | (A) (B) (C) (D) (E) |
| 7 | (A) (B) (C) (D) (E) | 37 | (A) (B) (C) (D) (E) | 52 | (A) (B) (C) (D) (E) |
| 8 | (A) (B) (C) (D) (E) | 38 | (A) (B) (C) (D) (E) | 53 | (A) (B) (C) (D) (E) |
| 9 | (A) (B) (C) (D) (E) | 39 | (A) (B) (C) (D) (E) | 54 | (A) (B) (C) (D) (E) |
| 10 | (A) (B) (C) (D) (E) | 40 | (A) (B) (C) (D) (E) | 55 | (A) (B) (C) (D) (E) |
| 11 | (A) (B) (C) (D) (E) | 41 | (A) (B) (C) (D) (E) | 56 | (A) (B) (C) (D) (E) |
| 12 | (A) (B) (C) (D) (E) | 42 | (A) (B) (C) (D) (E) | 57 | (A) (B) (C) (D) (E) |
| 13 | (A) (B) (C) (D) (E) | 43 | (A) (B) (C) (D) (E) | 58 | (A) (B) (C) (D) (E) |
| 14 | (A) (B) (C) (D) (E) | 44 | (A) (B) (C) (D) (E) | 59 | (A) (B) (C) (D) (E) |
| 15 | (A) (B) (C) (D) (E) | 45 | (A) (B) (C) (D) (E) | 60 | (A) (B) (C) (D) (E) |

- | | |
|----|---------------------|
| 16 | (A) (B) (C) (D) (E) |
| 17 | (A) (B) (C) (D) (E) |
| 18 | (A) (B) (C) (D) (E) |
| 19 | (A) (B) (C) (D) (E) |
| 20 | (A) (B) (C) (D) (E) |
| 21 | (A) (B) (C) (D) (E) |
| 22 | (A) (B) (C) (D) (E) |
| 23 | (A) (B) (C) (D) (E) |
| 24 | (A) (B) (C) (D) (E) |
| 25 | (A) (B) (C) (D) (E) |
| 26 | (A) (B) (C) (D) (E) |
| 27 | (A) (B) (C) (D) (E) |
| 28 | (A) (B) (C) (D) (E) |
| 29 | (A) (B) (C) (D) (E) |
| 30 | (A) (B) (C) (D) (E) |

	<u>Konstruk</u>	<u>No. Soalan</u>	<u>Jumlah Soalan</u>	<u>Bilangan Soalan Gagal Dijawab</u>	<u>Kegunaan Guru</u>
1	K1	1-4	4	<input type="checkbox"/>	<input type="checkbox"/>
2	K3	5-8	4	<input type="checkbox"/>	<input type="checkbox"/>
3	K5	9-14	6	<input type="checkbox"/>	<input type="checkbox"/>
4	K6	15-24	10	<input type="checkbox"/>	<input type="checkbox"/>
5	K7	25-28	4	<input type="checkbox"/>	<input type="checkbox"/>
6	K10	29-34	6	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>