حل مراجعة نهائية وفق الهيكل الوزاري الجديد منهج انسباير

تم تحميل هذا الملف من موقع المناهج الإماراتية
موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الحادي عشر العام ⇦ علوم ⇦ الفصل الأول ⇦ ملفات متنوعة ⇦ الملف
تاريخ إضافة الملف على موقع المناهج: 2025-12-11 18:46:29
المزيد من مادة علوم: ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس
إعداد: Messabi Al Arwa

التواصل الاجتماعي بحسب الصف الحادي عشر العام					
صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف الحادي عشر العام والمادة علوم في الفصل الأول	
1	مراجعة نهائية وفق الهيكل الوزاري الجديد منهج انسباير
2	حل مراجعة نهائية وفق الهيكل الوزاري منهج انسباير
3	حل مراجعة شاملة الجهاز الدوري والتنفسي
4	أوراق عمل الجهاز الدوري بدون الحل
5	حل أوراق عمل الجهاز التنفسي اختيار من متعدد

Term1 - Biology 11 General - 2025-2026 – هيكل اختبار الفصل 1 مادة الأحياء للصف 11 عام

Q	Learning Outcome/Performance Criteria	Example/Exercise	P
1	BIO.3.1.01.047- Recognize the components of the circulatory system and the role of the blood in the digestion and respiration	IFT = Information from text.	3
2	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems	IFT	6
		Figure 4	6
3	BIO.3.1.01.047 Recognize the components of the circulatory system and the role of the blood in the digestion and respiration	IFT	9
		Figure 9	9
4	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems	IFT	9
		IFT	10
5	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.	IFT	11
		Table 1	11
7	BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell	IFT	14
		Figure 13	14
8	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.	IFT	15
		Figure 15	15
6	BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems	IFT	12
9	BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems	IFT	17
		Table 2	17
10	BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.	IFT	15
		Figure 15	15
11	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems	IFT	14
		Figure 14	14
12	BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems	IFT	17
		Table 2	17
13	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.	Figure 1	3
		Demonstrate your Thinking Question 2	12
14	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems	IFT	7
		Figure 5	7
15	BIO.3.1.01.047 Recognize the components of the circulatory system and the role of the blood in the digestion and respiration	IFT	8
		Figure 7	8
16	BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems	IFT	11
17	BIO.3.1.01.047 Recognize the components of the circulatory system and the role of the blood in the digestion and respiration	IFT	5
		Figure 3	5
18	BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.	IFT	5

19	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems**	**IFT**	7
		Figure 6	7
20	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	15
21	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems.**	**IFT**	17
		Table 2	17
22	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	13
23	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	14
		Figure 13 + Question below it	14
24	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment.**	**IFT**	15
25	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	15
		Figure 15 + Question below it	15
26	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	14
		Figure 13	14
27	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**Figure 16**	16
28	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems.**	**IFT**	17
		Table 2	17
29	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	6
30	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems**	**IFT**	5

Academic Year العام الدراسي	2025/2026
Term الفصل	1
Subject المادة	Biology/Inspire الاحياء/انسبير
Grade الصف	11
Stream المسار	General العام

Number of MCQ عدد الأسئلة الموضوعية	30
Marks of MCQ درجة الأسئلة الموضوعية	(2-4)
Number of FRQ عدد الأسئلة المقالية	0
Marks per FRQ الدرجات للأسئلة المقالية	0
Type of All Questions نوع كافة الأسئلة	MCQ/ الأسئلة الموضوعية
Maximum Overall Grade الدرجة القصوى الممكنة	100

Questions which include Term 1 Exam

1	**BIO.3.1.01.047- Recognize the components of the circulatory system and the role of the blood in the digestion and respiration**	**IFT = Information from text.**	3
13	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.** **Demonstrate Understanding** 2. **Compare and contrast** the structure of arteries and the structure of veins.	**Figure 1** **Demonstrate your Thinking Question 2**	3 12
30	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	5
17	**BIO.3.1.01.047 Recognize the components of the circulatory system and the role of the blood in the digestion and respiration**	**IFT** **Figure 3**	5 5
18	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	5

1- Large blood vessels that carry oxygenated blood away from the heart are: **a-Veins** **b- Artery**

2- Blood vessels that carry deoxygenated blood to the heart are: **a-Veins** **b- Artery**

3- One-cell-thick blood vessels where Exchange of substances and wastes occur its: **a-Veins** **b- Capillary**

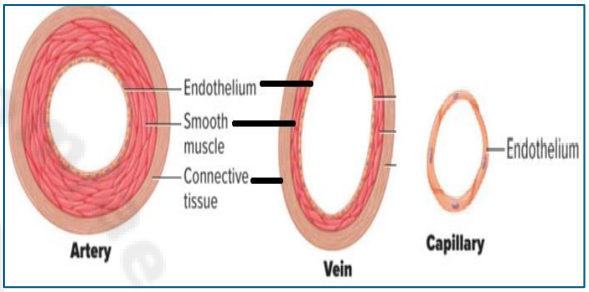


Figure 1 The three major blood vessels in the body are arteries, veins, and capillaries.

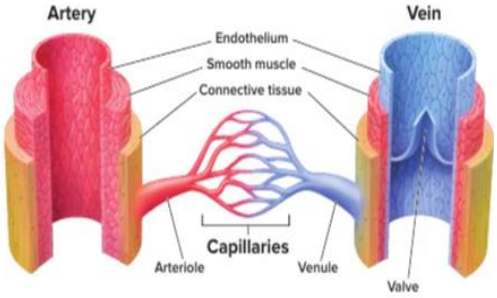
Predict *By what process do you think materials cross the walls of capillaries?* **Diffusion**

4- Feature	Arteries	Veins	Capillaries
Function	a-Carry blood **away** from the heart. b- Carry blood **towards** the heart.	a-Carry blood **away** from the heart. b- Carry blood **towards** the heart.	a- Exchange of gases, nutrients, and waste. b- Carry blood **towards** the heart.
Oxygen Level	a- Oxygen-poor + b- Oxygen-rich +	a- Oxygen-poor + b- Oxygen-rich +	a- Nothing Oxygen. b-Mixed exchange O2& CO2
Wall thickness & elastic	a- Thin, less elastic. b- Thick, more elastic	a- Thin, less elastic. b- Thick, more elastic	a- Thick, more elastic b- One cell thick. No elastic.
Endothelium layer	a- Thiner b- Thicker	a- Thiner b- Thicker	a- Thicker b- One cell thick.
Valves	a- Present b- No valves	a- Present b- No valves	a- Present b- No valves
Pressure	a- High pressure b- Low pressure	a- High pressure b- Low pressure	a-High pressure b- Very low pressure
Location	a- Closer to skin surface b- Deep within body	a- Closer to skin surface b- Deep within body	a- Closer to skin surface b- In almost all tissues

5- Why are valves present in the veins ?

a- Keep blood flowing in one direction.

b- To prevent blood backward. **c- Both a & b correct**



6- Why is the endothelial layer of arteries thicker than that of other blood vessels?

a- Arteries carry blood back to the heart.

b- Blood pumped from the heart at exerts high pressure.

Figure 3 Blood circulates throughout the body inside blood vessels.

Hypothesize *how body temperature can be regulated by the diameter of blood vessels.* كيف يمكن تنظيم درجة حرارة الجسم عن طريق قطر الأوعية الدموية؟

Idea: Through two processes: 1- **When you are cold**, blood vessels narrow to reduce blood flow to the skin, which conserves heat. 2- **When you are hot**, blood vessels widen to increase blood flow to the skin, which allows more heat to be released to the environment.

7- Dauring exercising muscle capillaries expand (dilate) so this will increase blood flow to working muscles, How?

a-More O2 to cells & removes extra waste from cells. **b-More waste to cells, more CO2 to cells.**

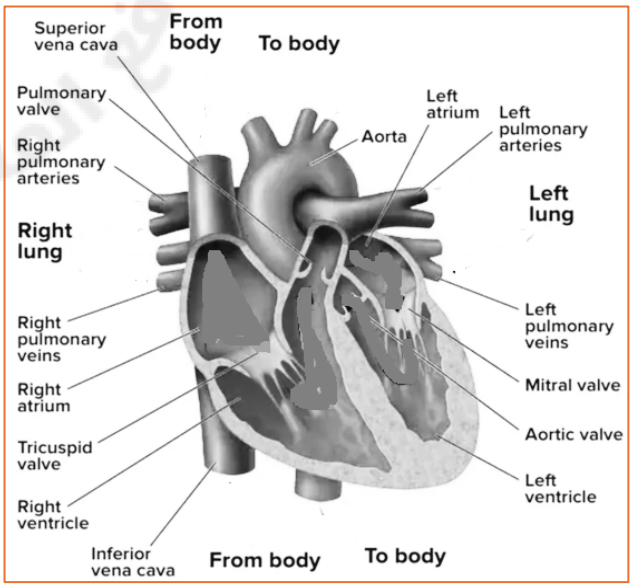
8- How does blood flow through low-pressure Veins? **a- Skeleton muscle contraction only.**

b- Breathing and precent of valves only. **c-Skeleton muscle, Breathing and valves all together.**

2	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems**	**IFT**	6
		Figure 4	6
29	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	6

Figure 4 The arrows map the path of blood as it circulates through the heart.

Diagram *the path of blood through the heart.*



9- Draw all arrows inside and outside of the heart:

10- Hollow, muscular organ that pumps oxygenated blood to the body and deoxygenated blood to the lungs is the: **a-Veins** **b- Heart**

11- Upper Heart chambers receive blood returned ?

Are left & right ...: **a- Ventricle** **b- Atrium**

12- Lower Heart chambers pump blood away from heart? Are left & right...: **a- Ventricle** **b- Atrium.**

13- The wall of the (**a-Right** **b-Left**) ventricle thicker provides the strength and pressure needed to push blood to all body. CHOOSE.

14- The biggest blood vessels in human body: **a- Aorta** **b- Valves.**


Aortic valve in an opened position

14	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems**	**IFT**	7
		Figure 5	7
19	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems**	**IFT**	7
		Figure 6	7

15- A group of cells that sends out signals telling the heart muscle to contract is the .**Pacemaker**

16- How do SA adjust the heart rate? **a- Body's CO_2 need.** **b- Body O_2 need.**

16- Feature	SA Node (Sinoatrial Node)	AV Node (Atrioventricular Node)
Location	a- Lower part of **right atrium** b- Upper wall of **right atrium**	a- Lower part of **right atrium** b- Upper wall of **right atrium**
Function	a- Primary pacemaker of the heart b- secondary pacemaker of the heart	a- Primary pacemaker of the heart b- secondary pacemaker of the heart
Role in Conduction	a- Receives impulse from SA , Ventricle contract b- Initiates impulses, atria to contract.	a- Receives impulse from SA , Ventricle contract. b- Initiates impulses, atria to contract.

Figure 5 The SA node initiates the contraction of the heart, which spreads through both atria to the AV node. The AV node transmits the signal through excitable fibers that stimulate both ventricles.

17- Look at the diagram of the heart then write the name of each node in the arrow either SA 0r AV:

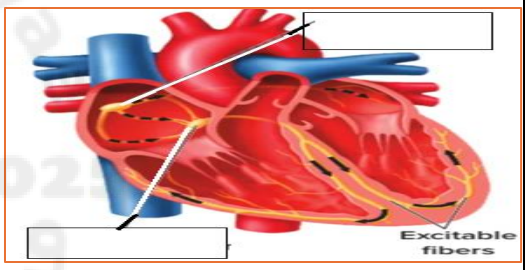


Figure 6 A sphygmomanometer measures the blood pressure in an artery.

Determine *What is this person's blood pressure? Is it normal? Explain.* **117 / .. 78**

18- Alternating expansion and relaxation of the artery wall caused by the contraction of the left ventricle is(70 per mins) : **a- Pulse** **b- Blood pressure**

19- Measure of how much pressure is exerted against the vessel walls by the blood:

a- Pulse **b- Blood pressure** **c- Pacemaker** **d- Atherosclerosis**

20- Blood pressure is measured by A device called ...:

a- Thermometers **b- A sphygmomanometer** **c- pulse oximeter**

21-Which is normal blood pressure for a healthy adult?

a-141/88 **b-162/91** **c- 108/65** **d- 113/77**

22- Normal Reading of the blood pressure is 120/80 mmHg, those numbers refer to:

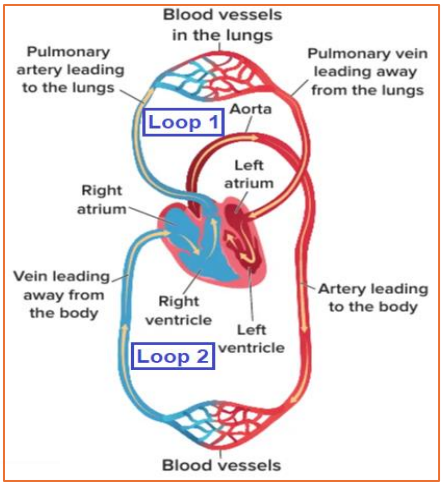
a- 120 Systolic (pressure during heartbeat) / 80 = Diastolic (pressure at rest).

b- 80 Systolic (pressure during heartbeat) / 120= Diastolic (pressure at rest).

23- The bad effect of high blood pressure over a long time is heart ..... and .....

15	**BIO.3.1.01.047 Recognize the components of the circulatory system and the role of the blood in the digestion and respiration**	**IFT**	8
		Figure 7	8

Figure 7 Blood flow through the body consists of two different circulatory loops.



24 - 1st loop: blood pumped from the heart to the ... to pick up O2 and get rid of CO2., and back to heart: **a- Liver** **b- Lunge**

25- 2 loop: blood pumped from the heart through and back to heart:

a- Lunge **b- All body**

26 A- 1st loop: The Right atrium receives Deoxygenated blood from all the body through .... vessels:

a- Pulmonary vein **b- Superior and inferior vena cava.**

27-The deoxygenated blood flow from Right atrium to **Right ventricle.**

28- The right ventricle pumped the deoxygenated blood to the ..... through .... vessels:

a- Lunge, Pulmonary artery **b- Lunge, Pulmonary vein**

29- The exchange of gases inside Lunge by Diffuse **O2** gas to Enter capillaries, while **CO2** gas exits out of the body.

30 - Second loop: The Left atrium receives Oxygenated blood from Lunges through .... vessels:

a- Pulmonary vein **b- Aorta** **c- Superior and inferior vena cava.**

31-The Oxygenated blood flow from Left atrium to .... ventricle: **a- Left** **b- Right**

32-The Left ventricle pumped the Oxygenated blood to all .... through .... vessels:

a- Lunge, Pulmonary artery **b- Body, Aorta** **c- Heart, Aorta**

33- What is the correct sequence of blood flow starting from the body?

a- Pulmonary artery → Left atrium → right ventricle →Aorta.

b-Superior and inferior vena cava → right atrium → right ventricle →Pulmonary artery→ Lung

34- What is the correct sequence of blood flow starting from the Lungs?

a- Pulmonary artery → Left atrium → right ventricle →Aorta.

b- Pulmonary vein → Left atrium → Left ventricle → Aorta → All body parts.

35- All the Veins carry Deoxygenated blood EXPET: **a- Superior vena cava** **b- Pulmonary vein**

36- All the arteries carry Oxygenated blood EXPET: **a- Aorta** **b- Pulmonary artery.**

37- Write (Left Or Right) in the blank below {look to heart image page 6 }:

Valve type	**a-Tricuspid valve**	**b- Pulmonary valve**	**c- Mitral (bicuspid) valve**	**d- Aortic valve**
Position between	***Right*** atrium & right ventricle.	***Right*** ventricle & pulmonary artery.	***Left*** atrium & left ventricle	***Left*** ventricle & Aorta .

3	**BIO.3.1.01.047 Recognize the components of the circulatory system and the role of the blood in the digestion and respiration**	**IFT**	9
		Figure 9	9
4	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems**	**IFT**	9
		IFT	10

Blood components	**Plasma**	**Platelet**	**White Blood Cells**	**Red Blood Cells**
Function	**Carry all materials & blood components.**	**blood clots with Fibrin**	**Fight infections**	**Carry oxygen**

Infer: If there too many White Blood Cells, **means your body is fighting an infection or inflammation**.

38- The fluid that transports important substances through the body is: **a-Plasma** **b-Blood**

39- Circle the blood components below:

a-Red blood cells **b-Lung** **c-White blood cells** **d- Stomach** **e-Platelets** **f- Plasma.**

40- Clear, yellowish fluid portion and its 50% of the blood is: **a-Plasma** **b-Blood**

41-Water is around ***90 %*** of the plasma and other dissolved material around ***10 %***.

42- Which of the following is **NOT** found in blood plasma?

a- Hormones **b-Oxygen-carrying hemoglobin** **c- Nutrients** **d-Waste products**

43- One of the main functions of plasma is to: **a-Carry oxygen** **b- Help blood clot**

c- Transport nutrients, hormones, and waste. **d- Attack infections directly**

44- Which proteins are commonly found in plasma?

a- Regulate water. **b-White blood cell proteins.** **c-For blood clots.** **d- All of them.**

45-The flat cell fragment that functions in blood clotting: **a- RBC** **b-WBC** **c- Platelet**

46-Protein helps form blood clots and stop bleeding: **a- Fibrin** **b- Platelet**

47- Arrange the following steps in the correct order to show how a blood clot forms:رتب المراحل التجلط

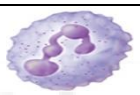
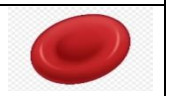
a- Fibrin forms a network of fibers that trap platelets and red blood cells.

b- Platelets release chemicals that produce fibrin protein.

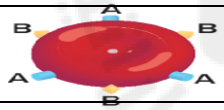
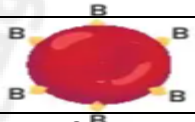
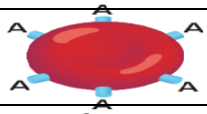
c- A blood clot forms.

Answer is: b / a. / c

Figure 10
A scab forms as fibrin threads trap blood cells and platelets.

48- Feature	White Blood Cells (WBCs)	Red Blood Cells (RBCs)
Function	a- Carry oxygen b- Fight infections.	a- Carry oxygen b- Fight infections.
Shape	a- Irregular shape **b-** Round and biconcave	a- Irregular shape **b-** Round and biconcave
Nucleus	a-Absent b- Present	a-Absent b- Present
Hemoglobin	a-Absent b- Present	a-Absent b- Present
Lifespan	a-Around 120 days b-Months or years	a-Around 120 days b-Months or years
Production site	a-Bone marrow and other organs. b- Bone marrow	a-Bone marrow and other organs. b- Bone marrow
Mobility	a-blood vessels & tissues. b-Blood vessels 	a-blood vessels & tissues. b-Blood vessels. 

5	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT** Table 1	11 11
16	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems**	**IFT**	11

Blood type	**(O)**	**AB**	**(A)**	**(B)**
Marker	**(Non)**	**(A & B)**	**A**	**B**
Antibodies	**Anti-.A & Anti- B**	**Non antibodies**	**Anti B**	**Anti (A.)**
Figure				
Can donate to	**(A/ B/ AB/ O)**	**AB**	**(A & AB)**	**(B & AB)**
Can receive from	**O**	**(A/ B/ AB/ O)**	**(A & O)**	**(B & O)**

Q49: Complete this table correctly:

50- A marker molecule attached to red blood cells which determines the blood types it's:

a- AB antibody **b- B antibody** **c- Blood group**

51-Proteins found in the plasma which recognize red blood cell with foreign markers is:

a- Antibodies **b- B markers** **c- Blood group**

52- What could result from giving type B blood to a type A person?

a- The red blood cells would clump and cause blockage in blood vessels.

b- The recipient's blood would carry more oxygen.

53- Why is **O** blood considered as the universal donor?

a. No anti-A or anti-B antibodies **b- It has no Markers on red blood cells.**

54- Why is **AB** blood considered as the universal receive?

a- No anti-A or anti-B antibodies **b- It has no Markers on red blood cells**

55-A type of factor or marker on the surface of red blood cells if it's found a person well Positive to it: **a- AB antibody** **b- B antibody** **c- Rh marker**

56-What can happen if a Rh(-) mother is carrying a Rh (+) fetus, and their blood mixes during pregnancy or delivery?

a-The mother's immune system makes anti Rh antibodies against Rh(+) fetus's blood.

b- The mother's body starts producing red blood cells rapidly

57- During another pregnancy the antibodies can cross the placenta and destroy red blood cells if fetus has: **a- Rh positive blood** **b- Rh negative blood**

⇒ **This problem happened ONLY if mother Rh Negative blood.**

6	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems.**	**IFT**	12

58- Which of the following can reduce the flow of oxygen-rich and nutrient-rich blood traveling through arteries? **a- Blood clots** **b- Fat deposits** **c- Answer a and b correct**

59- A disease of arteries in which fatty deposits reduced blood flow in the blood vessels

a-Pneumonia **b- Atherosclerosis**

59 Atherosclerosis mainly affects .... blood vessel: **a- Veins** **b- Arteries**

60- Which of the following is a possible consequence of atherosclerosis?

a- Increased flexibility of arteries **b- Heart attack or stroke**

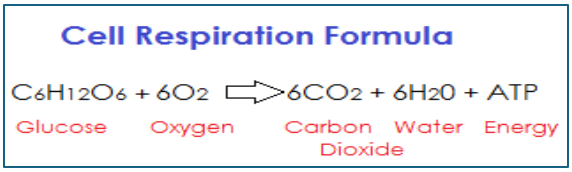
61- It occurs when blood flow to the brain is interrupted by a blockage or a ruptured blood vessel: **a- Stroke** **b- Heart attack**

62- It occurs when blood flow to the heart muscle is blocked, typically artery blockage:

a- Stroke **b- Heart attack**

22	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	13

63-The ... Energy rich molecules are needed for all body's cells. So, all body's cells and organs can do all activities: **a- Sugar** **b- ATP**



64-Subly O2 to all body cells and remove CO2 waste from cells is the main function of: a-**Circulatory system** **b- Respiratory system**.

65- The function of Respiratory system divides into two processes:

1- ***Breathing*** 2-. ***Respiration*** Which includes **External Respiration** & **Internal Respiration**.

66- The exchange of gases between the atmosphere and the blood:

a- External respiration **b- Breathing** **c- Internal respiration**

67-The mechanical movement of air into and out of the lungs is:

a- External respiration **b- Breathing** **c- Internal respiration**

68- The exchange of gases between the blood and the body's cells.

a- External respiration **b- Breathing** **c- Internal respiration**

69-Choose:	**Breathing**	**Cellular Respiration**
Process Type	a- Biochemical b- Mechanical	a- Biochemical b- Mechanical
Mechanism	a- Inhaling oxygen & exhaling carbon dioxide. b-Glucose + O2→ CO2 + H2O + ATP.	a- Inhaling oxygen & exhaling carbon dioxide. b-Glucose + O2→ CO2+ H2O + ATP.

7	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell**	**IFT**	14
		Figure 13	14
11	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	14
		Figure 14	14
23	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT - Figure 13 +** **Question below it**	14 14
26	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	14
		Figure 13	14

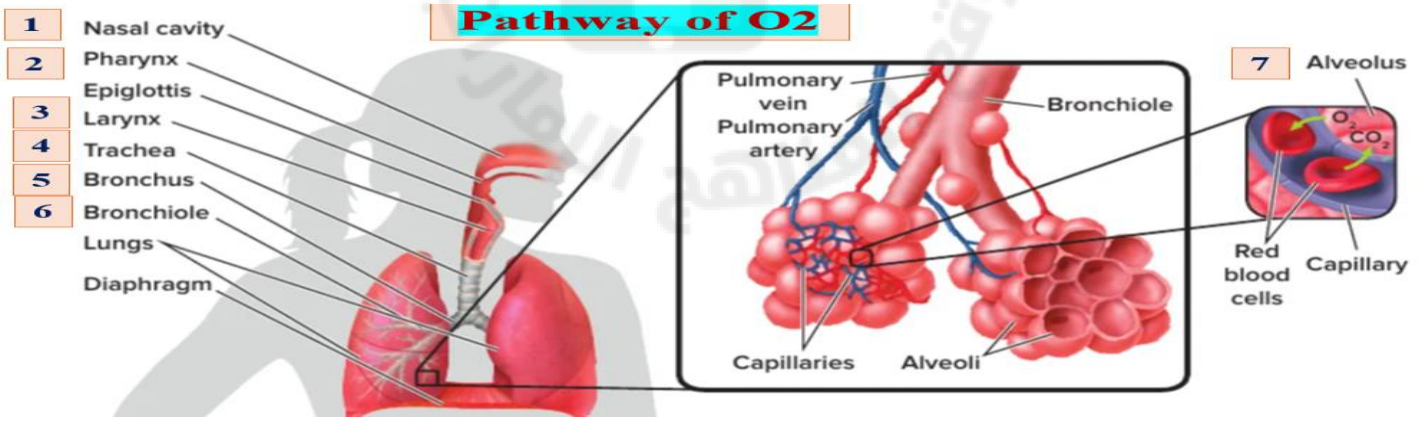


Figure 13 Air travels into the alveoli of the lungs, where gases are exchanged across thin capillary walls.

Diagram *Trace the path of oxygen from the atmosphere to the alveoli in the lungs.*

71-Which of the following correctly lists the **path of air** as it moves from the **outside environment to the alveoli** in the human respiratory system?

a- Nasal cavity → Trachea → Pharynx → Larynx → Bronchi → Bronchioles → Alveoli

b- Nasal cavity → Pharynx → Larynx → Trachea → Bronchi → Bronchioles → Alveoli

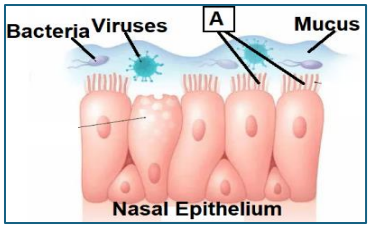
72- Air first enters the respiratory system through which structure?

a- Pharynx **b- Trachea** **c- Nasal cavity** **d- Bronchi**

73- The main function of the ... in the nose filters out dust in the air: **a-Cilia** **b- Hairs**

74- The { A } in this image line nasal passages its: **a-Cilia** **b- Hairs** **c-Mucus**

75- What is the function of hairlike cilia lining the nose?



a- To exchange gases in the alveoli

b- To expand and contract the lung

c- To move mucus and trap foreign particles out of the airways.

76-The ... membranes beneath the cilia warm and moisten the air while trapping foreign particles: **a-Cilia** **b- Hairs** **c-Mucus.**

Figure 14 Hairlike cilia line the mucous membranes of the nasal cavity.

77-- Which of the following structures prevents food from entering the trachea during swallowing? **a- Alveoli** **b- Epiglottis**

77b- Allows air to pass from the larynx to the trachea its: **a- Alveoli** **b- Epiglottis**

78- The larynx is commonly known as the: **a- Windpipe** **b- Voice box**

79- Which of the following is **NOT** part of the human respiratory system?

a- Lungs **b- Bronchi** **c- Stomach** **d- Diaphragm**

80- What is the main function of the trachea?

a- To exchange gases with the blood **b- To prevent air from entering the lungs**

b- To warm and filter the air **d-To carry air from the larynx to the bronchi**

81- What is the role of the bronchi in the respiratory system?

a- They transport oxygen to the blood **b-They carry air from the trachea to each lung**

82- The small sacs in the lungs, which has walls that are one cell thick surrounded by capillaries where actual exchange of gases (O_2 & CO_2) is called: **a- Bronchi** **b- Alveoli**

83- Why are the walls of alveoli only one cell thick?

a- To protect the lungs from bacteria. **b- To allow quick exchange of gases**

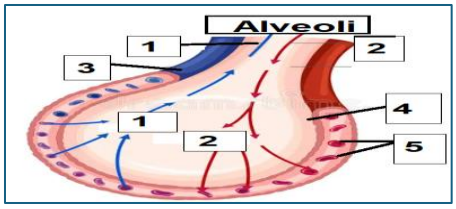
84- How does the thin wall of alveoli help with gas exchange?

a- It strengthens the structure of the lungs

b- It reduces the distance gases must travel.

8	**BIO.3.1.01.055 Explain the main structure and function of the respiratory, excretory and circulatory systems.**	**IFT**	15
		Figure 15	15
10	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	15
		Figure 15	15
25	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	15
		Figure 15 & Question below it	15

24	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment.**	**IFT**	15
20	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.**	**IFT**	15



85-Label all numbers in this figure below correctly:

a-(4) **Alveoli wall** **b-** (**3**) **Capillaries**

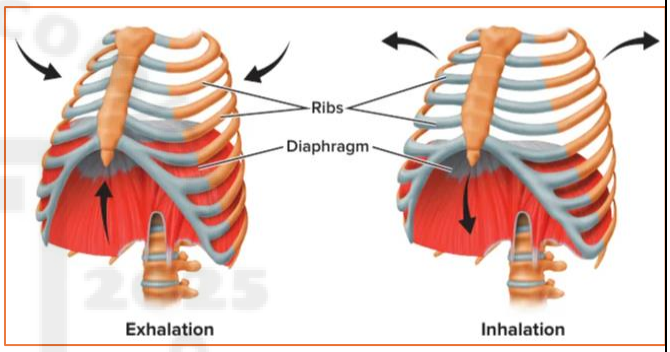
c -(**1**) **CO2** d-(**5**)**Red BC** e -(**2**) **O2**

86- O_2 diffuses across moist, thin walls from ***Alveoli*** to ***Capillary*** thin to red BCs. This O_2 released to all body cells during.... respiration**:** **a- Internal** **b-External**

87-CO_2 in blood crosses from capillary walls and diffuses into the ***Alveoli*** then travels to atmosphere during .... respiration**:** **a- Internal** **b-External**

88- The .... exists in three forms: Dissolved in plasma, bound to hemoglobin, in RBCs as carbonic acid: **a-O_2** **b- CO_2**

Figure 15 Rib and diaphragm muscles contract and relax during breathing.
Analyze *how air pressure is involved in breathing.*



Key idea: Increasing lung volume → Decreases air pressure → Air flows **inside alveoli.**

89-Choose the correct answer on the table below:

	Inhalation	**Exhalation**
Air Direction	a-Out of the lungs. b- Into the lungs	a-Out of the lungs. b- Into the lungs
Diaphragm	a- Relaxes, moves up b- Contracts, moves down	a- Relaxes, moves up b- Contracts, moves down
Chest Cavity	a- Expand b-Reduce	a- Expand b-Reduce
Ribcage فقص صدري	a-Moves up and out b- Moves down and in	a-Moves up and out b- Moves down and in
Rid & Diaphragm Muscle	a- Relaxes b- Contracts	a- Relaxes b- Contracts
Air Pressure	a- Decreases inside the lungs b- Increases inside the lungs	a- Decreases inside the lungs b- Increases inside the lungs

90- What is the function of the diaphragm in the respiratory system?

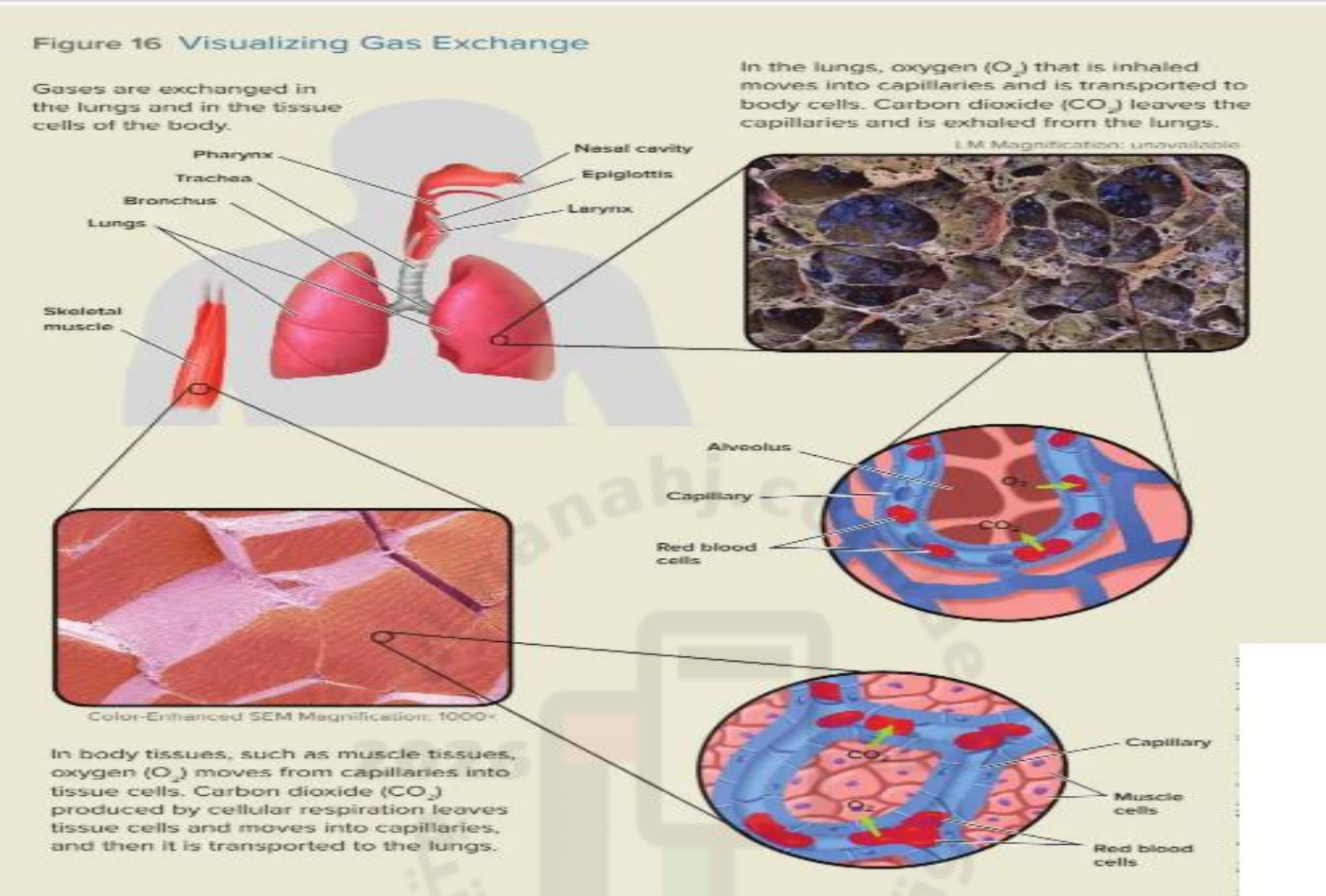
a- To transport oxygen to the blood. **b- To filter and moisten the air**

c- To help in the process of breathing by contracting and relaxing

91- How does the brain direct the rate of breathing?

a-O_2 needs **b- CO_2 concentration in blood** **c- Both answer a and b are correct.**

27	**BIO.3.1.01.064 Describe using the anatomy of respiratory system the process of ventilation and gas exchange from the environment to the cell.** **Study this figure**	**Figure 16**	16



92-Complete the following:

1-Around Alveoli Inside Lungs	a- The (***O2***) gas **inhaled** move into ***Capillary*** then to body cells. b- The (***CO2***) gas **exhaled** leaves the .***Alveoli*** then to atmosphere.
2- Near body tissues & cells	a- The (***O2***) gas **moves from capillaries** to ***all body cells*** b-The (***CO2***) gas **leaves** the body cells to ***Capillary*** then to ***Alveoli then*** to atmosphere.

9	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems**	**IFT**	17
		Table 2	17
12	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems**	**IFT**	17
		Table 2	17
21	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems.**	**IFT**	17
		Table 2	17
28	**BIO.3.1.01.061 Describe some disorders related to the respiratory, digestive and circulatory systems.**	**IFT**	17
		Table 2	17

93- What is the common effect of disorders that damage bronchi and alveoli tissues?

a- Increased oxygen absorption **b-Faster breathing rate** **c- Difficulty in respiration**

94- How does smoking affect the respiratory system according to the passage?

a- It strengthens the alveoli **b- It enhances cellular metabolism**

c- It causes chronic irritation and inhibits cellular metabolism

95- What can airborne materials like pollen trigger in some individuals?

a- Lung cancer **b- Increased metabolism**

c- Respiratory problems due to allergic reactions

96- What happens when respiratory tissues are damaged?

a- Breathing becomes easier **b- Oxygen levels increase in the blood**

c-The effectiveness of bronchi and alveoli is reduced.

⇒ 97- Write the correct number of the disorder near its description:

Disorder	Brief Description
1. **Bronchitis**	***a-(4)*** Infection of the lungs causes the alveoli to collect mucous material.
2. **Lung cancer**	***b-(3)*** Respiratory pathways become irritated, and bronchioles constrict.
3. **Disorder Asthma**	***c-(2)*** Uncontrolled cell growth in lung tissue can lead to a persistent cough, shortness of breath, bronchitis, or pneumonia, and can lead to death
4. **Pneumonia**	***d-(1)*** Respiratory pathways become infected, resulting in coughing and production of mucus.
5. **Emphysema**	***d- (5)*** Alveoli breakdown, resulting in reduced surface area needed for gas exchange with the alveoli's blood capillaries.

You become the best of yourself.
Good Luck for my best students 😊 Ms. Arwa Almessabi...