

 <b>Cambridge Assessment</b> International Education		
GRADE: IGCSE YR-2	SUBJECT: BIOLOGY(0653)	DATE: 31 <sup>st</sup> March, 2020
WORKSHEET NUMBER: 1	WORKSHEET TOPIC: RESPIRATION	
INSTRUCTION (IF ANY):	Answer the following questions in the hard copy/note-book and send back pics.	

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Q1. State any 5 uses of energy in the body of humans.

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.....

.....

Q2. Define aerobic respiration.

.....

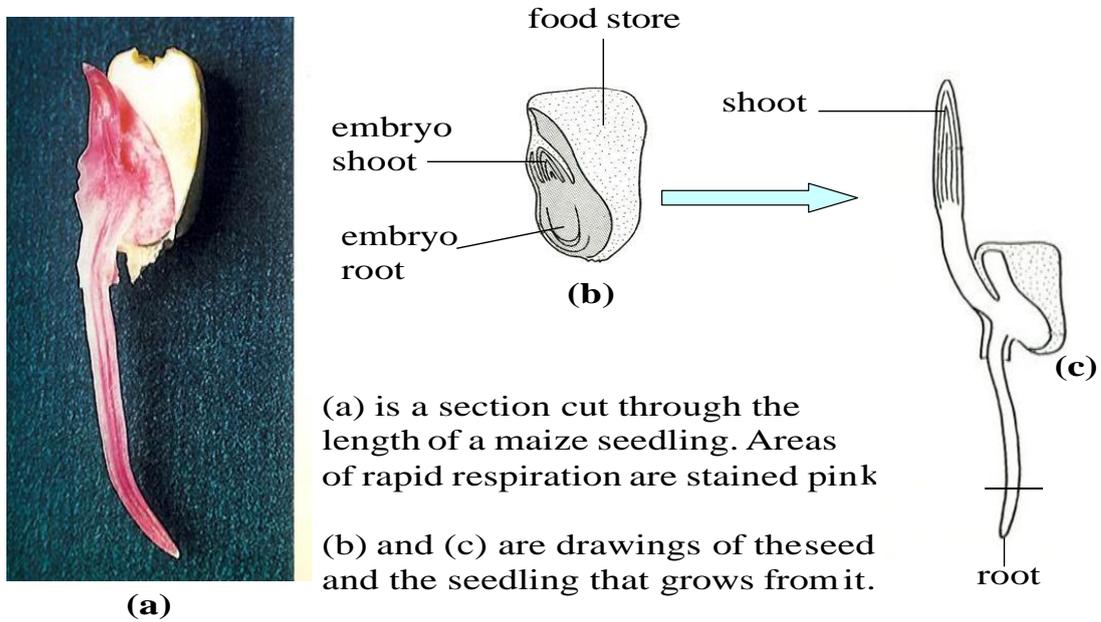
.....

Q3. What is the purpose of respiration?

.....

.....  
Q4. State the word and chemical equation for aerobic respiration.

Q5. Look at the picture below:



Can you suggest reasons why respiration should be so rapid in the stained regions?

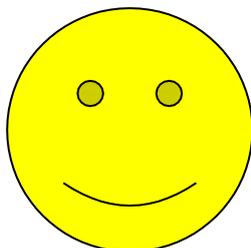
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- .....
- Q6. What is the most important point about respiration?  
(a) it uses oxygen  
(b) It produces energy  
(c) It produces carbon dioxide  
(d) It needs food and air  
[ ]
- Q7. In which part of the human body is respiration most likely to be occurring?  
(a) The lungs  
(b) The heart  
(c) The muscles  
(d) All of these  
[ ]
- Q8. Which of these are waste products of respiration?  
(a) Carbon dioxide  
(b) Water  
(c) Oxygen  
(d) Nitrogen  
[ ]
- Q9. Which of the following would be reliable indicators of respiration in a living organism?  
(a) Output of water vapour ( $H_2O$ )  
(b) Output of carbon dioxide ( $CO_2$ )  
(c) Uptake of oxygen ( $O_2$ )  
(d) Production of energy  
[ ]
- Q10. Which of the following statements are correct?  
(a) We breathe in air  
(b) We breathe in oxygen  
(c) We breathe out air  
(d) We breathe out carbon dioxide  
[ ]

*“ STAY SAFE & HEALTHY ”*

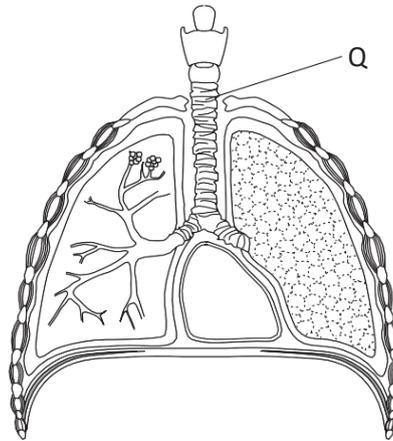


 <b>Cambridge Assessment</b> International Education		
GRADE: IGCSE YR-2	SUBJECT: BIOLOGY(0653)	7 <sup>th</sup> April,2020
WORKSHEET NUMBER: 2	WORKSHEET TOPIC: Gas exchange in humans	
INSTRUCTION (IF ANY ):	Answer the following questions in the hard copy/note-book and send back pics.	

**NAME:** \_\_\_\_\_

**SUBMISSION DATE:** 10<sup>th</sup> April, 2020

**Q1.** The diagram shows some structures in the human neck and thorax.



The lining of tube Q has cilia.  
What is an important function of the cilia?

- A to help in the exchange of gases
- B to increase the internal surface area of tube Q
- C to moisten the air entering and leaving the lungs
- D to move mucus towards the throat

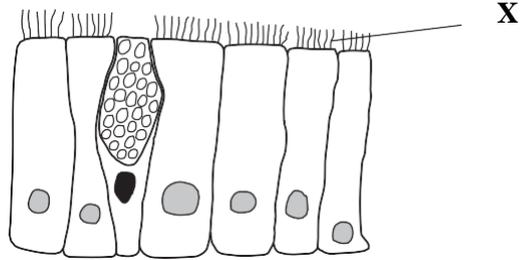
[    ]

**Q2.** What are the functions of the diaphragm and the cilia in the human gas exchange system?

	diaphragm	Cilia
A	contracts to cause breathing in	carry mucus to the throat
B	contracts to cause breathing out	trap bacteria from the air
C	relaxes to cause breathing in	filter dust from the air
D	relaxes to cause breathing out	produce mucus

[    ]

**Q3.** The diagram shows some ciliated cells from the trachea.



What is the function of the parts labelled X?

- A detecting stimuli
- B exchanging gases
- C moving mucus
- D trapping bacteria

[ ]

**Q4.** What are the properties of an efficient gas exchange system, assuming it has a good blood supply?

- A large surface and thick walls
- B large surface and thin walls
- C small surface and thick walls
- D small surface and thin walls

[ ]

**Q5.** The diagram shows someone blowing up a balloon.



What percentage of the gas in the balloon is carbon dioxide?

- A 0.04%
- B 0.4%
- C 4.0%
- D 40%

[ ]

**Q6.** Which route is taken by air passing into the lungs of a human?

- A alveolus → trachea → bronchus
- B bronchus → trachea → alveolus
- C trachea → alveolus → bronchus
- D trachea → bronchus → alveolus

[ ]

**Q7.** What are features of gaseous exchange surfaces in animals?

- A thick-walled, dry, large area
- B thick-walled, moist, small area
- C thin-walled, dry, small area
- D thin-walled, moist, large area

[ ]

**Q8.** Which features are present in gaseous exchange surfaces?

	large surface area	moist
A	✓	✓
B	✓	✗
C	✗	✓
D	✓	✓

key

✓ = present

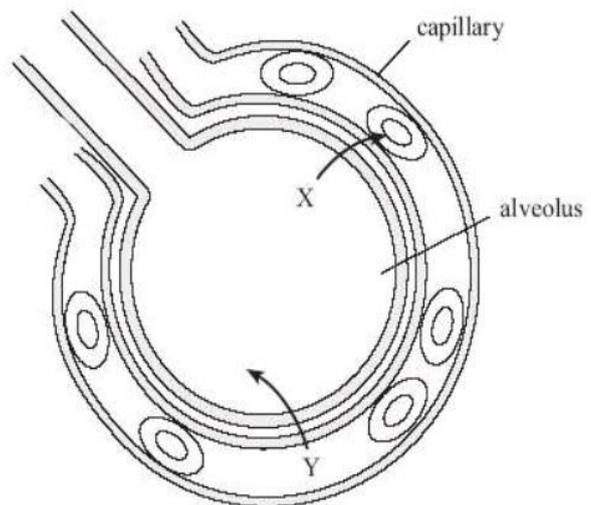
✗ = not present

[ ]

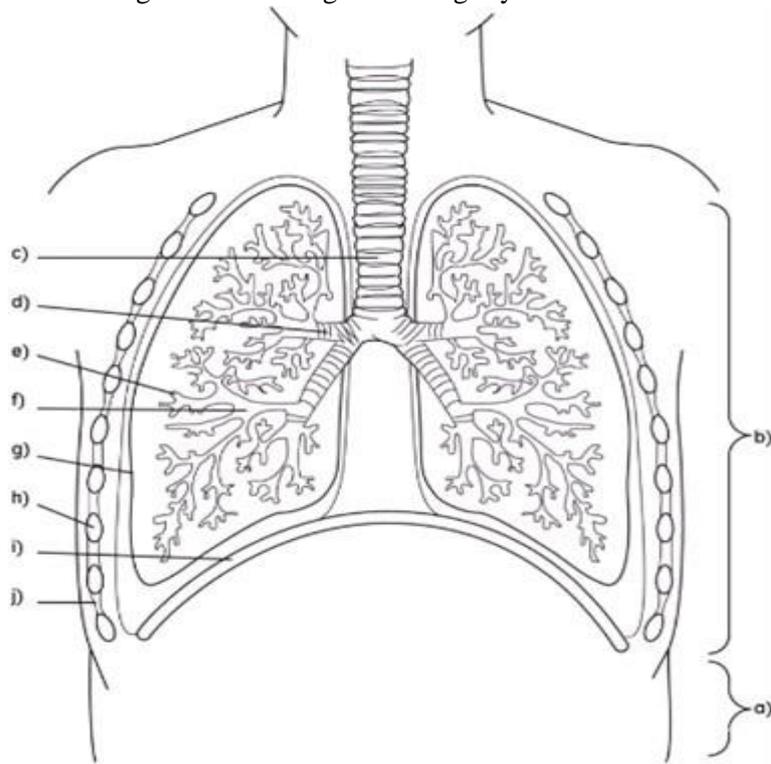
**Q9.**

Gas exchange takes place in an alveolus.

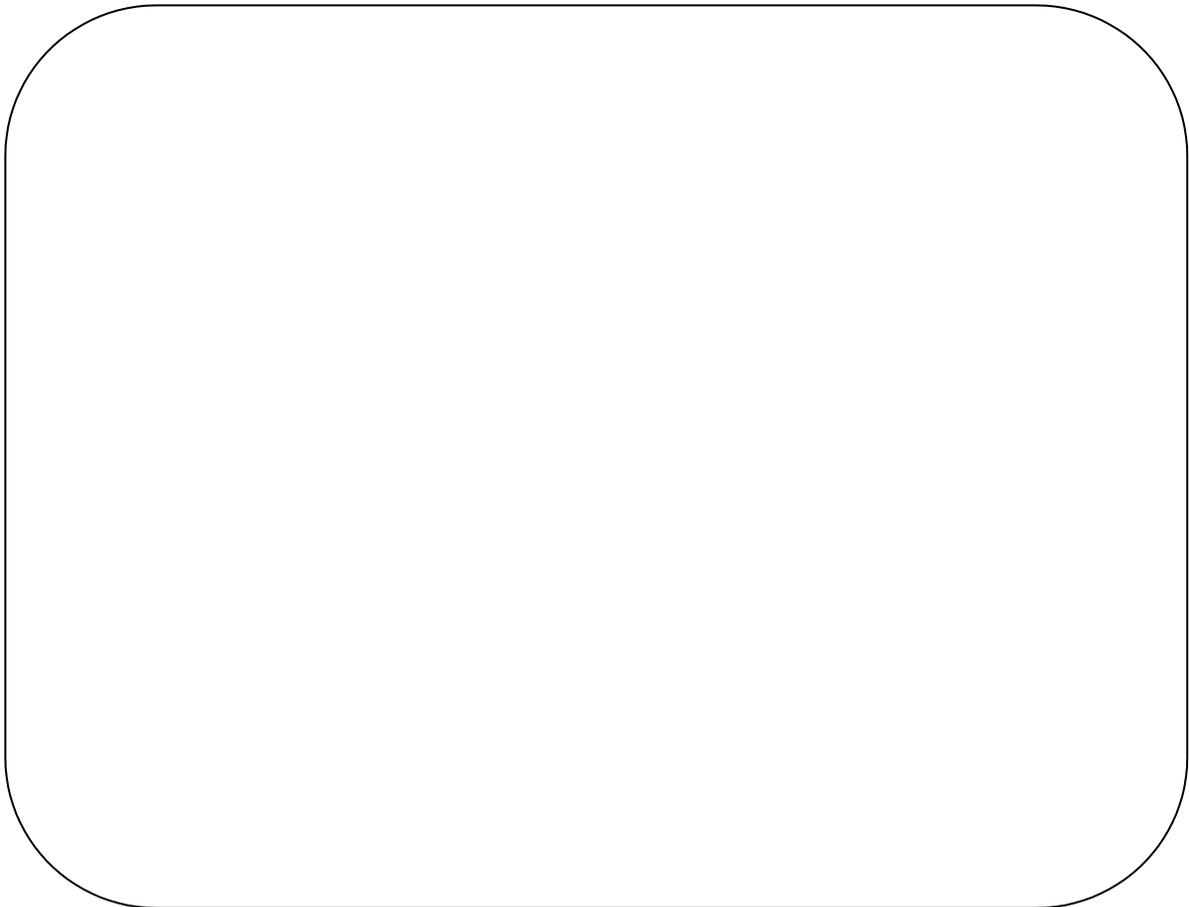
- a. Name gas X.
- b. name gas Y.
- b. Gas Y is a product of respiration. Name another product of respiration is also breathed out.



**Q10.** Draw a labelled diagram of human gas exchange system.



1. Add a label (k) to show the location of the pleural membrane.



**Q11.**

Explain how the structural adaptations of alveoli suit them to their function of gas exchange:

- **Thin wall -**
  
- **Rich capillary network -**
  
- **Increased Surface area**
  
- **Moist -**

*n.b. you can remember these structural adaptations by remembering them as TRIM.*

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**Q12.**

Complete the following sentences to describe the exchange of gases takes place in the alveoli of the lungs.

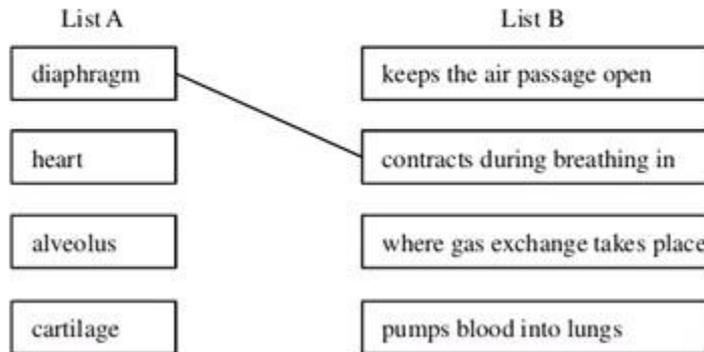
*There are millions of alveoli which give a very large\_\_\_\_\_.*

*It is here that\_\_\_\_\_ from the air passes into the blood through the very thin walls of blood vessels called\_\_\_\_\_.*

*At the same time \_\_\_\_\_ leaves the blood.*

Q13.

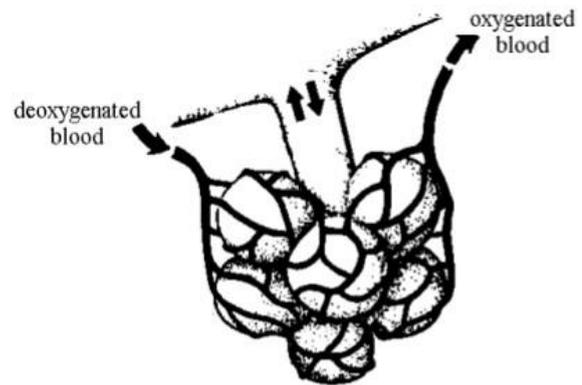
List A names some of the structures in the thorax. List B gives the function of each structure, but in a different order. Draw a straight line from each structure in List A to its function in List B. One has been done for you.



Q14.

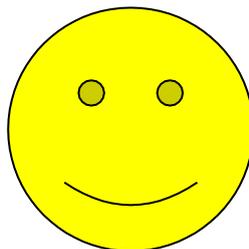
The diagram shows alveoli in a lung.

Name TWO features of an alveolus which are essential for efficient gas exchange.



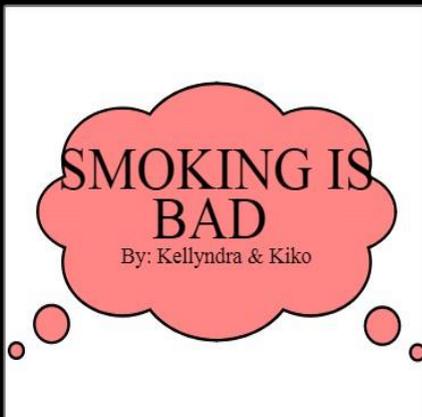
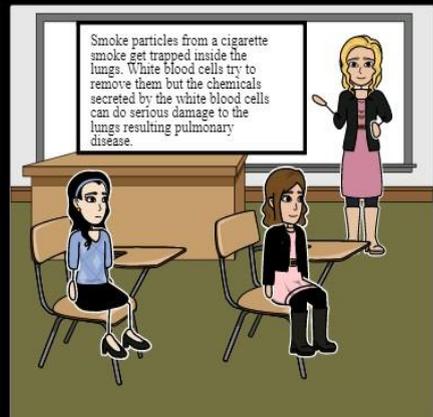
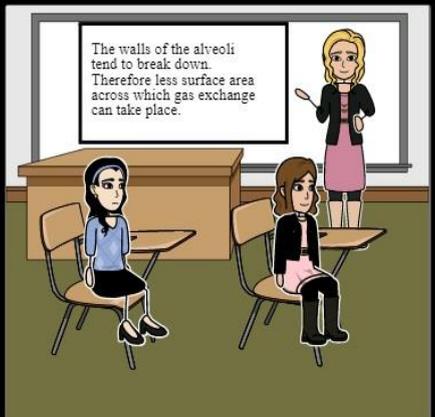
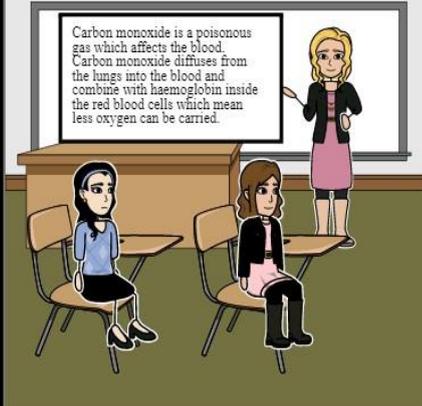
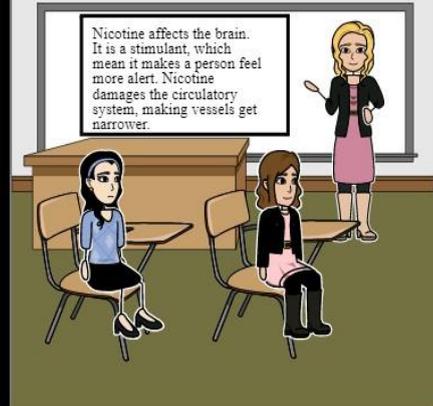
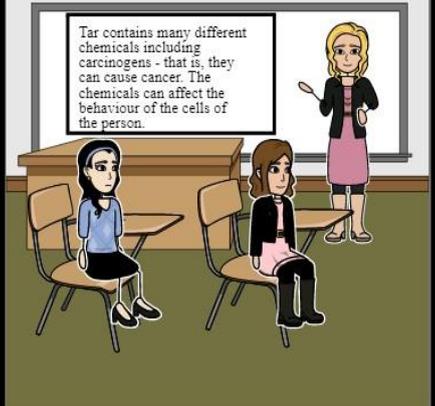
1)..... 2) .....

**“STAY SAFE & HEALTHY”**

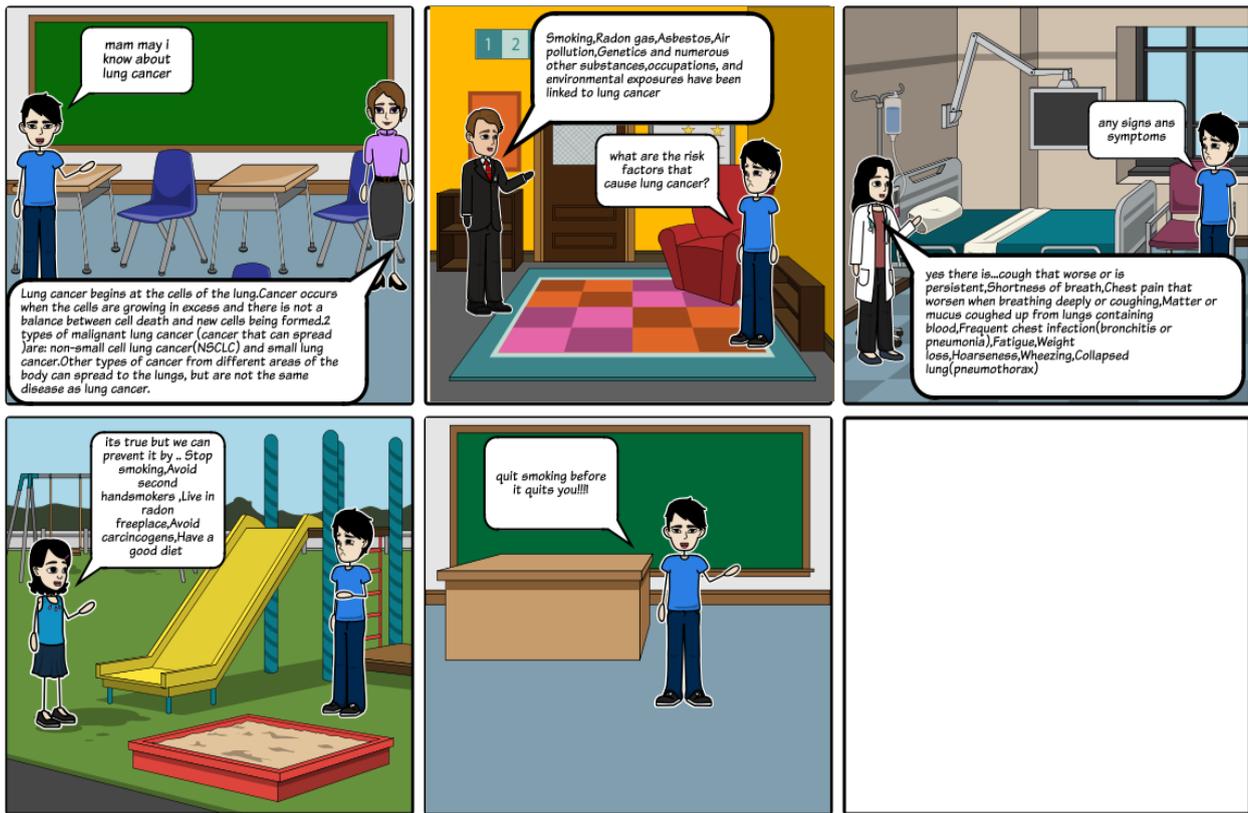


 <p>Cambridge Assessment International Education</p>		
<b>GRADE: IGCSE YEAR-II</b>	<b>SUBJECT: BIOLOGY (0653)</b>	<b>DATE: 14<sup>TH</sup> APRIL, 2020</b>
<b>WORKSHEET NUMBER: 3</b>	<b>WORKSHEET TOPIC: RESPIRATION AND GAS EXCHANGE</b>	
<b>INSTRUCTION (IF ANY):</b>	<b>Answer the following questions in the hard copy/note-book and send back pics. Do the End of Unit questions also.</b>	

**Read the comic strip on "Tobacco smoking"**

<p>Smoking Is Bad</p>	<p>Effect of tobacco smoke towards the gas exchange system</p>	<p>Effect of tobacco smoke towards the gas exchange system</p>
		
<p>Components of Tobacco - Carbon monoxide</p>	<p>Components of Tobacco - Nicotine</p>	<p>Components of Tobacco - Tar</p>
		

**Read the comic strip on "LUNG CANCER":**

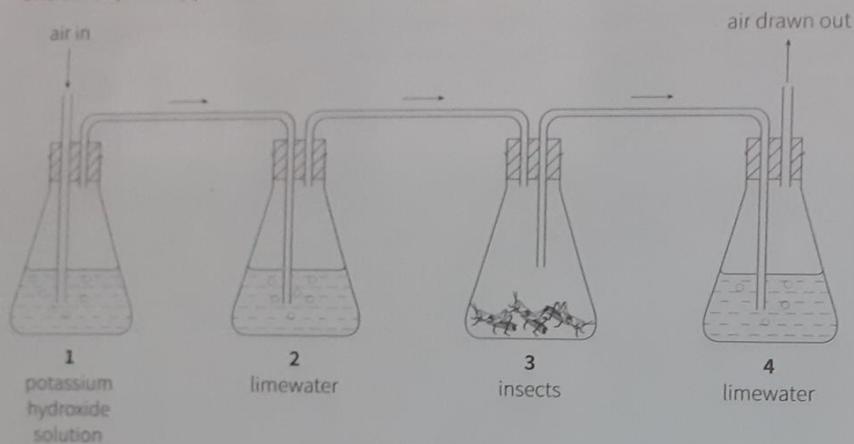


Create your own at [Storyboard That](https://www.storyboardthat.com/)

## End-of-chapter questions

- List **five** different uses of energy in the human body.
  - Name the process that releases energy from food, so that the body can use it.
  - Write a word equation for the process that you have named in **b**.
- List **three** differences between inspired air and expired air.
  - Explain the reasons for these differences.
- Explain what is meant by the term *gas exchange*.
  - Where is the gas exchange surface in humans?
  - List **three** features of the human gas exchange surface that help it work efficiently.
- For each description, state whether it applies **to** aerobic respiration, **to** anaerobic respiration or **to** both.
  - lactic acid or alcohol made
  - energy released from glucose
  - carbon dioxide made
  - heat released
- Describe, in detail, the pathway of an oxygen molecule as it moves from the air outside your body, into your **blood**, and **to** a cell in a muscle in your arm. You could write your answer in words, or use a flow diagram, or perhaps a mixture of both. You will need **to** think about what you have learnt about the human transport system, as well as what you have learnt in this chapter.

- 6 A student is investigating one of the characteristics of living things using insects. She sets up the apparatus shown in the diagram below.

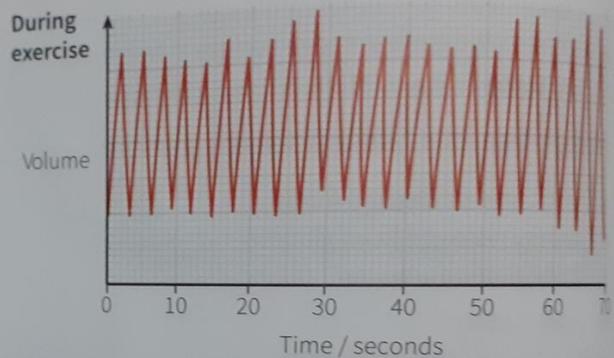
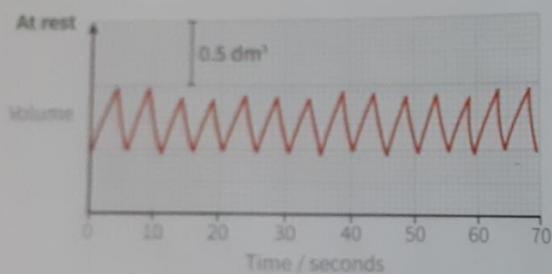


Air is drawn through the apparatus from left to right as shown. The potassium hydroxide in flask 1 removes any carbon dioxide from the air.

- a
  - i State the purpose of the limewater in flask 2. [1]
  - ii Predict the appearance of the limewater in flask 2 after 10 minutes. [1]
- b
  - i State the purpose of the limewater in flask 4. [1]
  - ii Predict the appearance of the limewater in flask 4 after 10 minutes. [1]
- c Suggest a control for this experiment. [1]
- d
  - i State the appearance of the liquid in flask 4 at the end of the experiment if it had contained water and Universal (full range) Indicator rather than limewater. [1]
  - ii Explain your answer to d.i. [1]
- e Name the process inside living cells that is responsible for the changes that are observed in this experiment. [3]

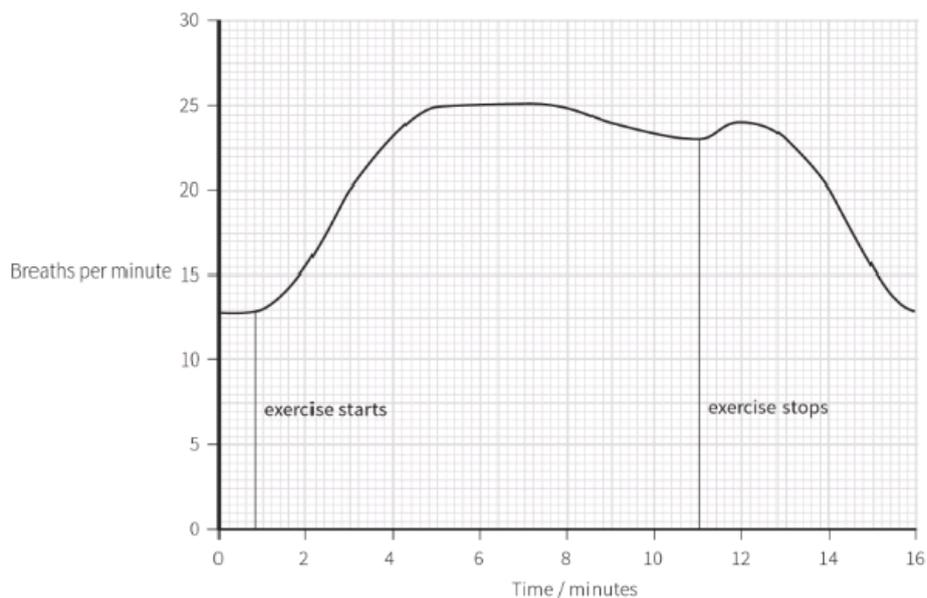
(Cambridge IGCSE Biology)

- 7 A girl breathed into a machine that recorded the volume of the air that she breathed in and out. The results were recorded as a graph of volume against time. The diagrams show results obtained when she was resting and when she was exercising.



- a Use the first graph to find how many breaths per minute the girl took while she was resting. [1]
  - b Use the second graph to find how many breaths per minute the girl took while she was exercising. [1]
  - c Use the first graph to find the volume of the first breath that she took while she was resting. (Remember to include the unit in your answer.) [1]
  - d Use the second graph to find the volume of the second breath that she took while she was exercising. [1]
  - e Explain how these changes in rate and depth of breathing helped the girl to do the exercise. [4]
  - f Describe the mechanism that brought about these changes in rate and depth of breathing in the girl's body. [4]
- the girl's body. [4]

8 The graph shows how a student's breathing rate changed during and after exercise.



- a Calculate the increase in the student's breathing rate from when he started to exercise, to its maximum rate. [2]
- b Calculate how long it took, after he finished exercise, for his breathing rate to return to normal. [2]
- c Explain why his breathing rate did not return to normal immediately after exercise stopped. [4]
- d Describe and explain how you would expect the student's heart rate to change during the 16-minute period shown on the graph. [4]

 Cambridge Assessment International Education	 The Revival of Tradition	
GRADE: IGCSE-II	SUBJECT: BIOLOGY(0653)	DATE: 4 <sup>th</sup> May, 20
WORKSHEET NUMBER: 2	WORKSHEET TOPIC: Cells and Cell Organelles	
INSTRUCTION (IF ANY):	Do the worksheet neatly in the hard copy/ note- book and mail back Answer sheet on or before the date of submission.	

NAME: \_\_\_\_\_

SUBMISSION DATE: 6<sup>th</sup> May, 20

Q1. Complete the following table by writing the number of the structure/function in the left hand column that matches the cell part in the right hand column.

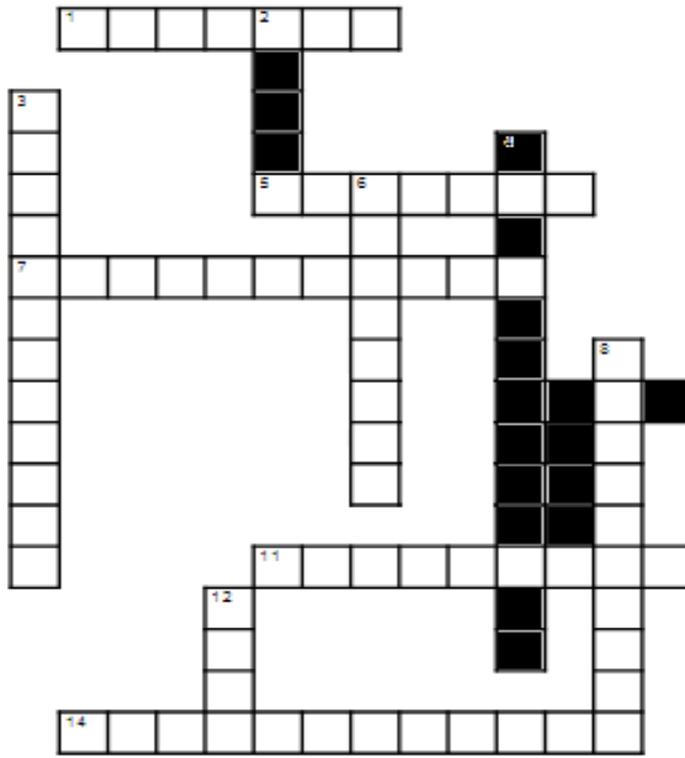
S. No.	Structure/Function	Cell Part
1	Produces a usable form of energy for the cell	<b>NUCLEUS</b>
2	Organelle that manages or controls all the cell functions in a eukaryotic cell	<b>CELL WALL</b>
3	Contains chlorophyll, a green pigment that traps energy from sunlight and gives plants their green color	<b>MITOCHONDRIA</b>
4	Provides temporary storage of food, enzymes and waste products	<b>VACUOLE</b>
5	Firm, protective structure that gives the cell its shape in plants.	<b>CELL MEMBRANE</b>
6	The membrane surrounding the cell	<b>CHLOROPLASTS</b>

Q2. Put a check in the appropriate column(s) to indicate whether the following organelles are found in plant cells, animal cells or both.

Organelle	Plant Cells	Animal Cells
Cell Wall		
Chloroplast		
Cytoplasm		
Mitochondria		
Nucleus		
Central vacuole		

Q3. Complete the crossword with the help of hints

### Cell Structures Crossword



**Across**

- 1 This organelle stores food, water, and waste for a cell. (7)
- 5 This organelle is usually in the center of the cell and controls the cell. (7)
- 7 This organelle can be found in plant cells and is the place where photosynthesis occurs. (11)
- 11 A gel-like substance that fills a cell. (9)
- 14 This controls what goes in and out of a cell. (4,8)

**Down**

- 3 These organelles provide the cell with energy by breaking down food. (12)
- 6 Plants cell have this thick outer part but animal cells don't. (4,4)
- 8 A tool used to view cells. (10)
- 12 A basic building block of living organisms. (4)



- 1.....
- 3.....
- 5.....
- 6.....
- 7.....
- 8.....
- 11.....
- 12.....
- 14.....

**Q4.** Explore a little and match

Column I	Column II
1. Mitochondria	(a) Cell
2. Functional unit of life	(b) Nucleus
3. Control unit of cell	(c) Unicellular
4. Single-celled organism	(d) Discovery of cell
5. Robert Hooke	(e) Power house of a cell
6. Combination of tissues	(f) Transfers messages
7. Cytoplasm	(g) Jelly-like substance
8. Nerve cell	(h) Forms organ
9. Living substance in the cell	(i) Cell wall
10. Outermost thick layer in plant cells	(j) Protoplasm

**Q5.** Draw neat proportionate and labeled diagram of the typical plant cell and the typical animal cell.

**NOTE:**

- Make good use of the space on your sheet paper.
- Your drawing should be large, but do leave space around it so that you have room for labels.
- Always use a sharp HB pencil and have a good eraser with you.
- Keep lines single and clear.
- Don't use shading unless it is absolutely necessary.
- Don't use colours.
- Draw proportionately.
- Use a ruler to draw each label line.
- Make sure the end of the label line actually touches the structure being labeled.
- Write labels horizontally.
- Keep the labels away from the drawing as well they should be properly spaced.

**TYPICAL ANIMAL CELL**

.....

**TYPICAL PLANT CELL**

Q5.

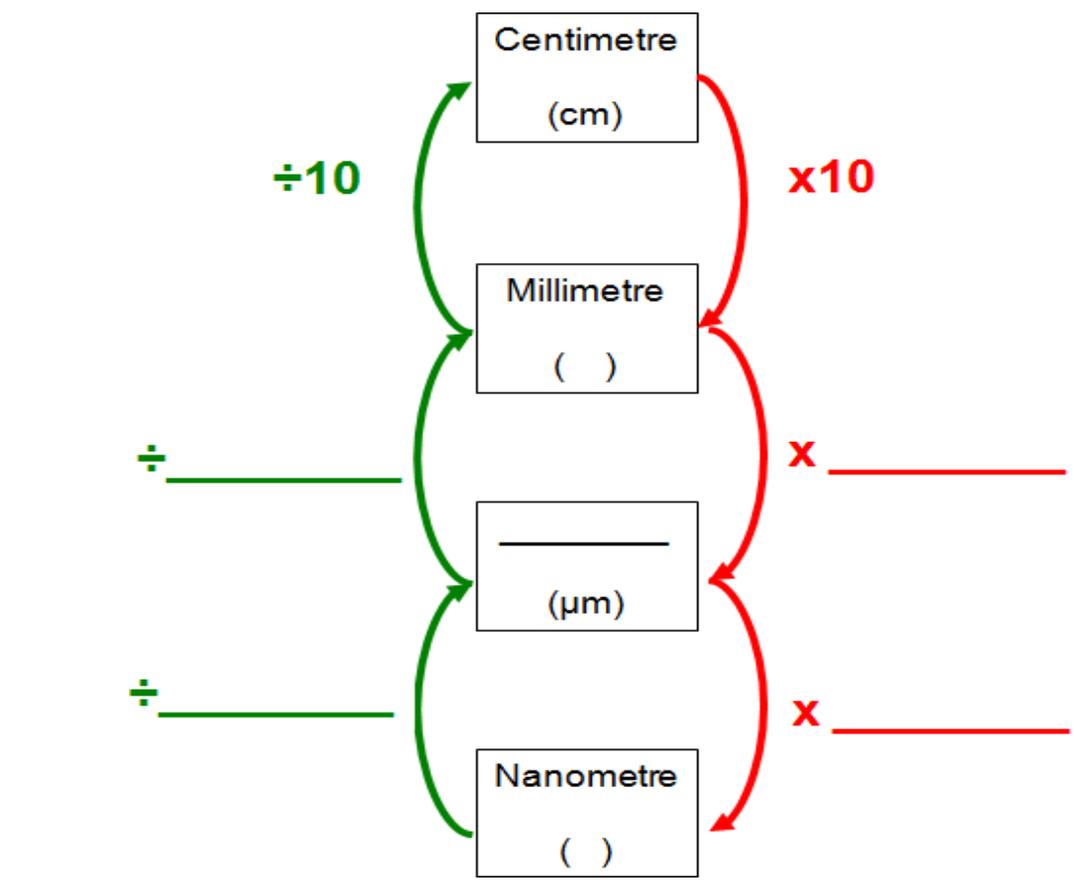


 <b>Cambridge Assessment International Education</b>	 <i>The Revival of Tradition</i>	
<b>GRADE: IGCSE YR-II</b>	<b>SUBJECT: BIOLOGY (0653)</b>	<b>4<sup>th</sup> May, 20</b>
<b>WORKSHEET NUMBER: 3</b>	<b>WORKSHEET TOPIC: Microscopes and magnification</b>	
<b>INSTRUCTION (IF ANY):</b>	Answer the following questions in the hard copy/note-book and mail back the answer sheet on or before Submission date.	

NAME: \_\_\_\_\_ SUBMISSION DATE: **7<sup>th</sup> May, 20**

### Units of measurement

**Q1)** Complete the diagram below to show: names of the units of measurement, unit symbols and mathematical operations for converting between units.



**Q2)** Complete the table below to show the corresponding value nanometres, micrometres and millimetres for the measurements given in each row. The first row has been completed for you. Ensure that your answers use the correct unit symbols.

<u>Nanometre</u>	<u>Micrometre</u>	<u>Millimetre</u>
5	0.005	0.000005
1		
	1	
		1
	3	
7		
		0.5

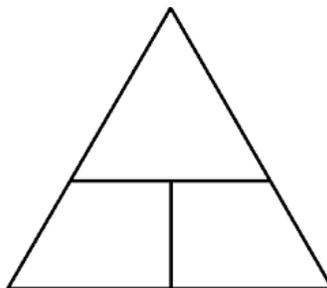
### Calculating Magnification

**Magnification** is the number of times larger an image is compared with the real size of the object.

In order to calculate magnification you need to divide the size of the image by the actual size of the specimen.

<p><b>Formula</b></p> <p>Magnification =</p>
--

You also need to rearrange the equation. Putting it in a triangle helps.



### Worked Example

In Biology class, Judy drew a diagram of a worm. The actual length of the worm is 10cm but Judy drew it 15cm long. Using this information work out the magnification of her drawing.

- 1) Magnification = Image / Actual
- 2) Image= 15cm
- 3) Actual= 10 cm
- 4) Magnification = 15cm/ 10 cm
- 5) **Magnification = x1.5**

### Practice questions- You must show your working out!

**Q3)** The actual size of a woodlouse is 0.4mm but Robert drew is 5mm long. What is the magnification?

**Q4)** A plant cell in a photograph measures 15 mm across. If the actual size of the cell is 0.015 mm, what is the magnification in the photograph?

**Q5)** The nucleus in a photograph of a cell measures 3 mm across. If the magnification in the photograph is  $\times 500$ , what is the actual size of the nucleus?

**Q6.** You are looking at onion cells under a microscope and want to know how big the cells really are. You measure the size of the cells as it appears and find out that it measures 20mm with a magnification of  $\times 1000$ . Work out the actual size of the cell.

**Q7)** What is the image size of a virus head, in the actual size is 6.8mm and it has been magnified  $\times 2500$ ?

**Q8)** A scientist observed a cell using an electron microscope.

The size of the image was 25 mm.

The magnification was  $\times 100\,000$

Calculate the actual size of the cell.

Give your answer in micrometers.

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Real size = \_\_\_\_\_ micrometers

**Q9)** How many times a light microscope magnify?

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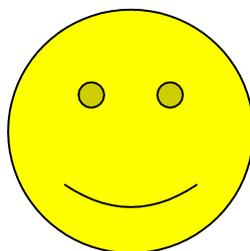
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**Q10)** If an object was 1 mm across, how big would it look like if it were magnified ten times?

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.....

**“STAY SAFE & HEALTHY”**



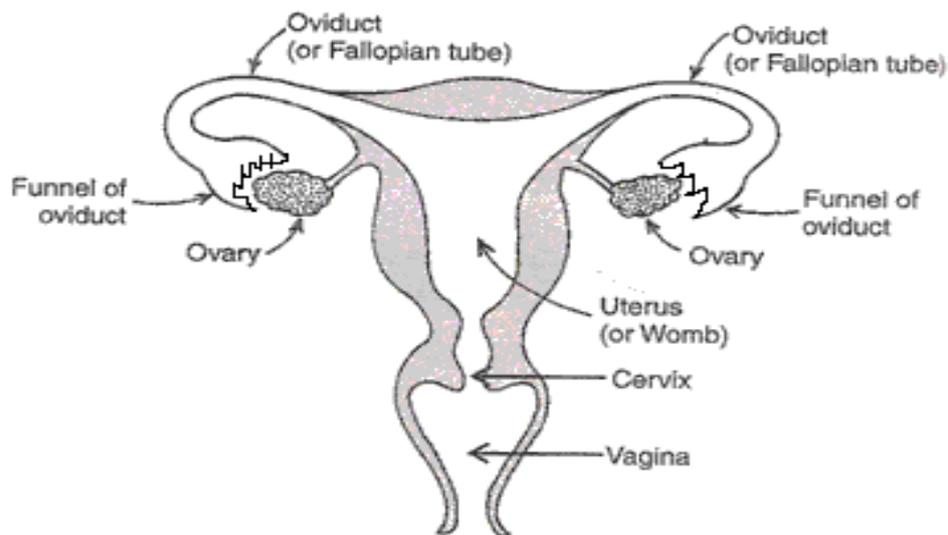
 <b>Cambridge Assessment International Education</b>	 <b>SANSKAR SCHOOL</b> <i>The Revival of Tradition</i>	 <b>ESSENCE INTERNATIONAL SCHOOL AWARD</b> 2016-2019
<b>GRADE: IGCSE YEAR - 2</b>	<b>SUBJECT: BIOLOGY (0653)</b>	<b>DATE: 25.6.20</b>
<b>WORKSHEET NUMBER: 1</b>	<b>UNIT – B-11- Reproduction in humans WORKSHEET TOPIC(S): B11.01 Human reproductive organs</b>	
<b>INSTRUCTION (IF ANY ):</b>	<b>Do the questions in notebook.</b>	

**SUBMISSION DATE OF H.W.: 26<sup>TH</sup> May, 2020**

## **CLASS ASSIGNMENT**

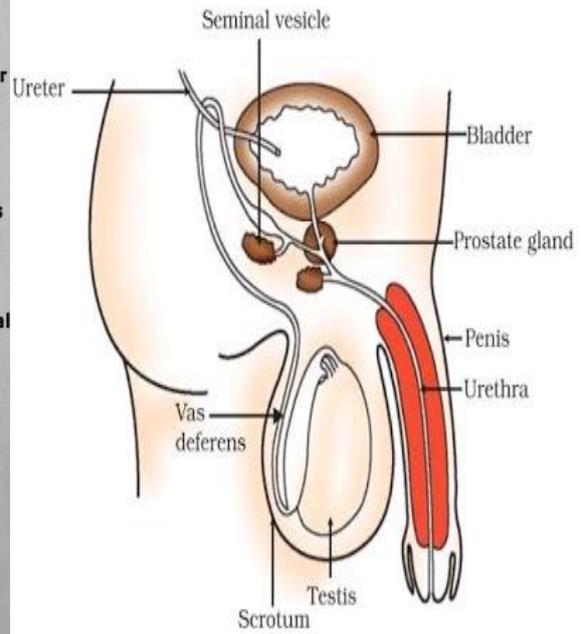
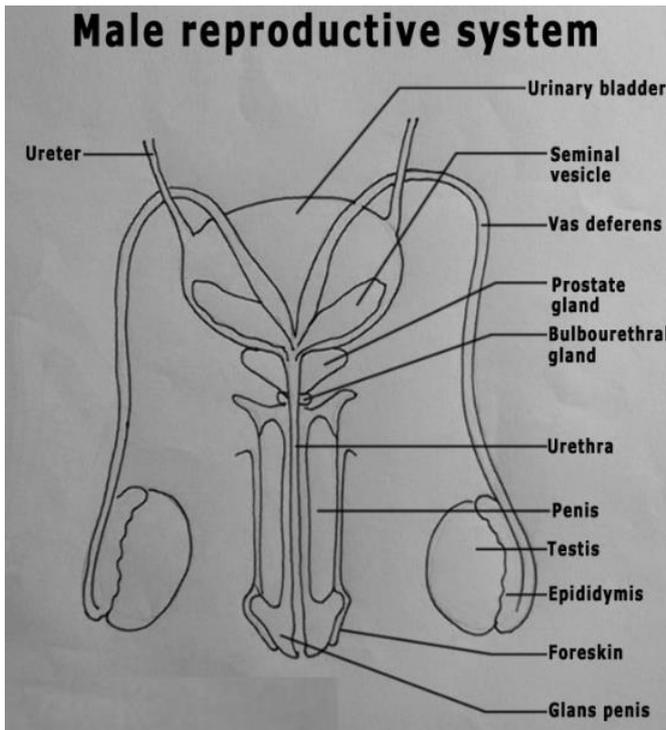
### **KEY TERMS**

- 1) Reproduction
- 2) Oviduct
- 3) Fallopian tube
- 4) Uterus
- 5) Urethra
- 6) Cervix
- 7) Testes
- 8) Scrotum
- 9) Epididymis
- 10) Prostate gland
- 11) Ovulation



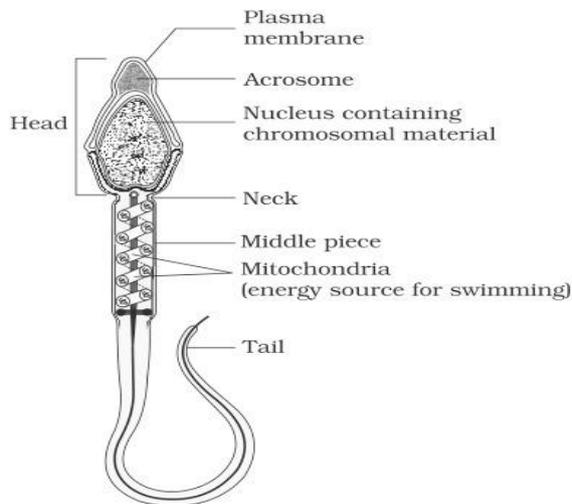
The female reproductive system in humans (front view).

- Q1) Where are eggs made?**
- Q2) Do Fallopian tubes connect directly to the ovaries?**
- Q3) When do eggs begin to be formed inside a girl's ovaries?**
- Q4) What is the other name of fallopian tube?**



**Human-male reproductive system**

- Q5) Where are testes present? Why?
- Q6) Name the common duct to pass both urine and sperm?
- Q7) When do sperm begin to be made in testes?



- Q8) What is the role of tail?
- Q9) Where is genetic information stored in a sperm?
- Q10) What is the approximate length of a sperm?

**HOME ASSIGNMENT**

**Do in text questions From B11.01 to B11.07 (given on page 140 of course book)**

**Do "End of chapter questions" Q1 , page 143 – course book**

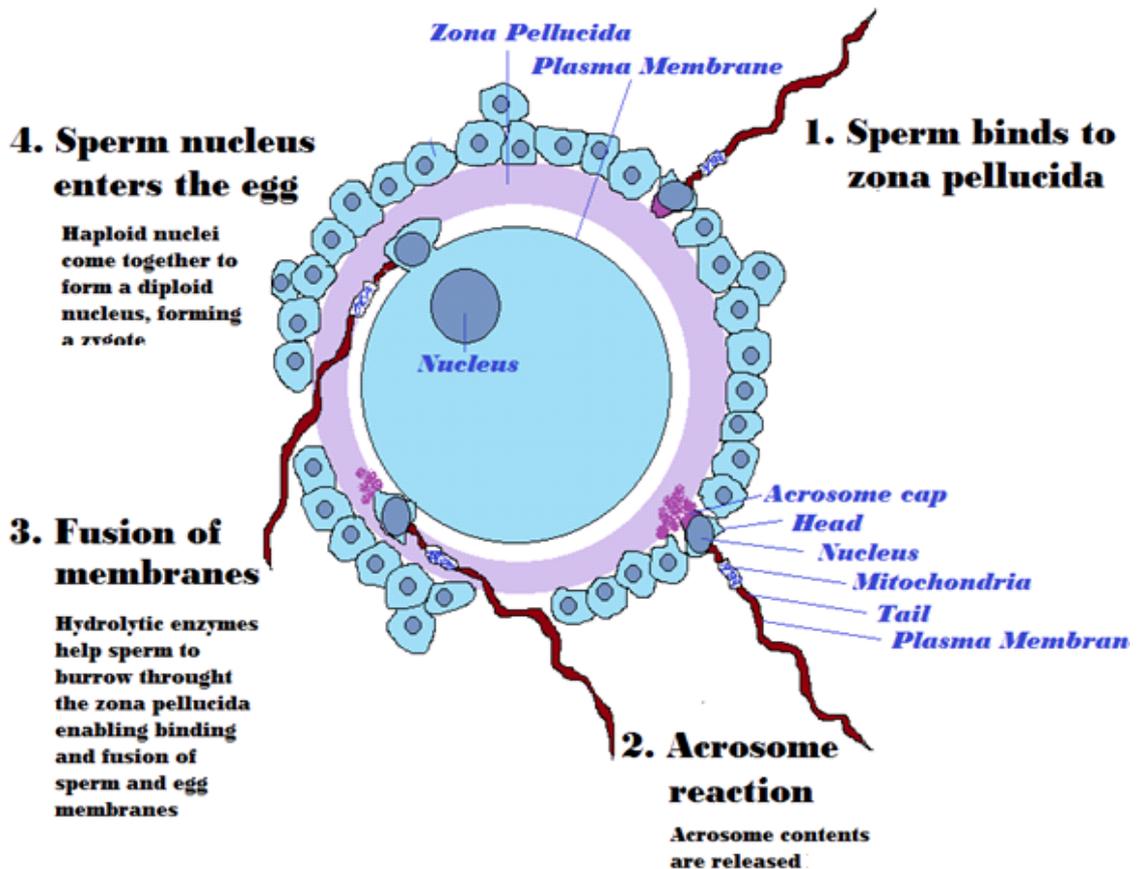
 Cambridge Assessment International Education	 <b>SANSKAR</b> <b>SCHOOL</b> <i>The Revival of Tradition</i>	
GRADE: IGCSE YEAR - 2	SUBJECT: BIOLOGY (0653)	DATE: 27 <sup>th</sup> June, 2020
WORKSHEET NUMBER: 2	UNIT – B-11- Reproduction in humans WORKSHEET TOPIC(S): B11.02 Fertilization and development	
INSTRUCTION (IF ANY):	Do the questions in notebook.	

Submission date of H.W. – 1<sup>st</sup> July, 2020

### CLASS ASSIGNMENT

#### KEY TERMS

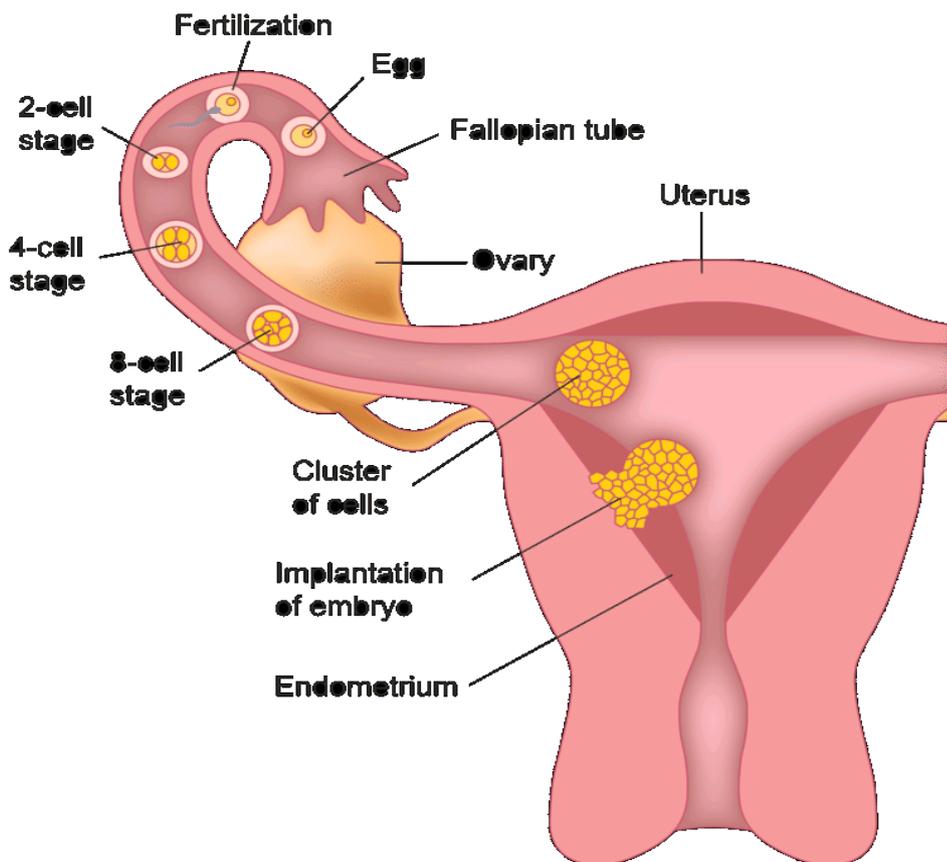
- 1) Acrosome
- 2) Fertilization
- 3) Implantation
- 4) Endometrium



Link for fertilization <https://youtu.be/7ww5T7hCdn4>

- Q1) With which speed, sperm swim in the female reproductive tract?
- Q2) What is the fluid, containing the sperm called?
- Q3) What is the approximate size of an egg cell?

- Q4)** Define fertilization.
- Q5)** What is the role acrosome?
- Q6)** How many sperms can enter an egg cell? Why?
- Q7)** What is released from a sperm into the cytoplasm of an egg cell?
- Q8)** What is formed as a result of fertilization?
- Q9)** After how many hours of ovulation, an egg can be fertilized?
- Q10)** Why a million sperm are released into the vagina?



**Link for Implantation** <https://youtu.be/1KL8HAm3uSY>

- Q11)** Zygote divides and form a ball of cells? What is this ball of cells called?
- Q12)** From where does embryo obtain food?
- Q13)** How many cells are there when an egg is implanted?
- Q14)** What is placenta?
- Q15)** What is amnion? What is the role of amniotic fluid?

### HOME ASSIGNMENT

**Do in text questions From B11.08 to B11.11 (given on page 140 of course book)**

**Do "End-of-chapter questions" Q2 to 4 , pages – 143 & 144 of course book**

 Cambridge Assessment International Education	 The Revival of Tradition	
<b>GRADE: IGCSE YEAR - 2</b>	<b>SUBJECT: BIOLOGY (0653)</b>	<b>DATE: 30.6.20</b>
<b>WORKSHEET NUMBER: 3</b>	<b>UNIT – B-11- Reproduction in humans</b> <b>WORKSHEET TOPIC(S): B11.03-The menstrual cycle</b>	
<b>INSTRUCTION (IF ANY):</b>	Do the questions in notebook.	

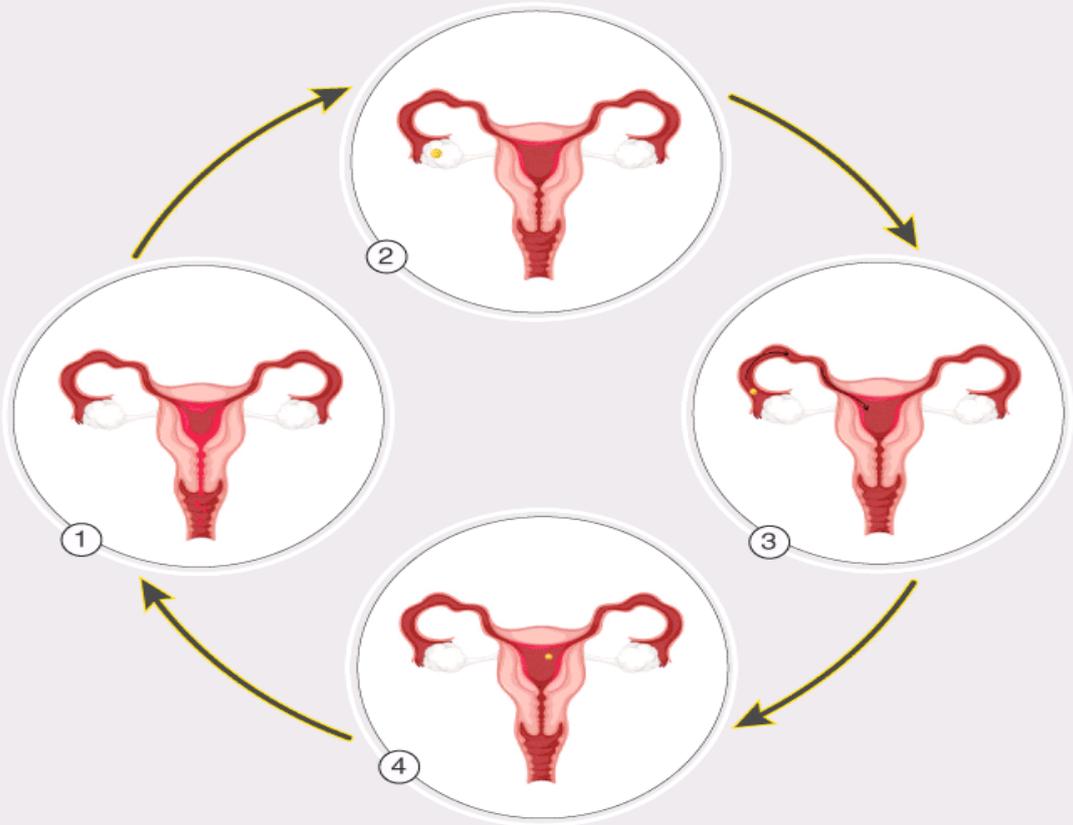
**SUBMISSION DATE OF H.W. - 2<sup>nd</sup> July 2020**

**CLASS ASSIGNMENT**

**KEY TERMS**

- 1) Menstrual cycle
- 2) Mensruation
- 3) Disintegrates
- 4) Follicle
- 5) Corpus luteum
- 6) Vascular

**MENSTRUAL CYCLE**

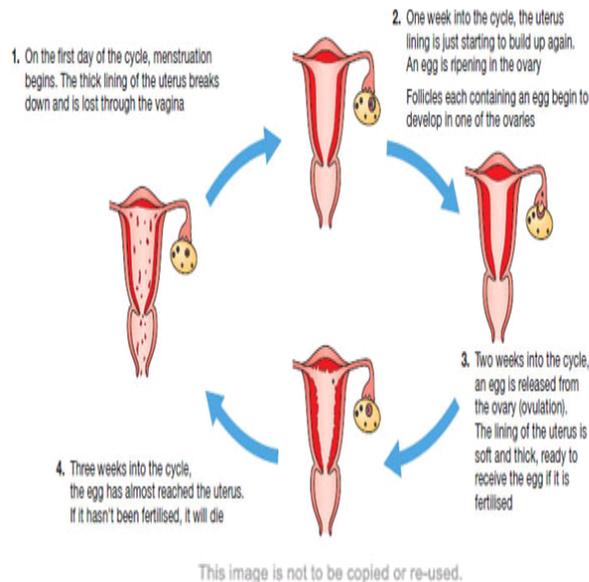
1 Menstrual phase | 
2 Follicular phase | 
3 Ovulation phase | 
4 Luteal phase

The **menstrual cycle** is the regular natural change that occurs in the female reproductive system that makes pregnancy possible. The cycle is required for the production of oocytes, and for the preparation of the uterus for pregnancy.

## What is the menstrual cycle?

Between the ages of about 11 and 17 years, a girl's ovaries begin to release eggs, and her periods begin (**menstruation**). The event marks the beginning of **puberty**.

Figure 2 summarises the stages of the menstrual cycle.



**Figure 2:** The menstrual cycle: the timing of events varies depending on the individual. Why is the menstrual cycle called a 'monthly' cycle?

**Q1) Define menstruation?**

**Q2) What are the different stages of menstrual cycle?**

**Q3) What happens in the each stage of menstrual cycle?**

### HOME ASSIGNMENT

**Do in text questions From B11.12 & B11.13 (given on page 140 of course book)**

**Draw the menstrual cycle from your course book.**

 Cambridge Assessment International Education	 <b>SANSKAR SCHOOL</b> <i>The Revival of Tradition</i>	
<b>GRADE: IGCSE YEAR - 2</b>	<b>SUBJECT: BIOLOGY (0653)</b>	<b>DATE: 7.7.20</b>
<b>REVISION TEST-I</b>	<b>UNIT – B-11- Reproduction in humans</b> <b>Topic: Human reproductive System</b>	
<b>INSTRUCTION (IF ANY):</b>	<b>Time – 50 min MM: 30</b>	

**PAPER-1**

**MCQ [13X1=13 Marks]**

1) Which statement about sexual reproduction is always correct?

- A It involves only one parent.
- B It involves the fusion of nuclei.
- C It produces genetically identical offspring.
- D It takes place only in animals.

2) Which row is correct for sexual reproduction?

	genetically different offspring produced	one parent	zygote produced
<b>A</b>	✓	✓	✗
<b>B</b>	✓	✗	✓
<b>C</b>	✗	✓	✗
<b>D</b>	✗	✗	✓

3) What are the features of sexual reproduction?

	fusion of nuclei	nature of offspring
<b>A</b>	no	genetically dissimilar
<b>B</b>	yes	genetically identical
<b>C</b>	no	genetically identical
<b>D</b>	yes	genetically dissimilar

4) Which row describes sexual reproduction?

	number of parents	offspring genetically identical to parents	involves zygote production
<b>A</b>	1	✓	✓
<b>B</b>	1	✗	✗
<b>C</b>	2	✓	✗
<b>D</b>	2	✗	✓

5) What are the characteristics of asexual reproduction?

	fusion of gamete nuclei	genetic variety in the offspring
<b>A</b>	✓	✓
<b>B</b>	✓	✗
<b>C</b>	✗	✓
<b>D</b>	✗	✗

6) Which statement about human gametes is correct?

- A Egg cells are much smaller than sperm cells.
- B Egg cells are produced in larger numbers than sperm cells.
- C Egg cells have a jelly coating that changes after fertilisation.
- D The flagellum is an adaptive feature of an egg cell.

7) Four students are comparing the human male and female gametes.

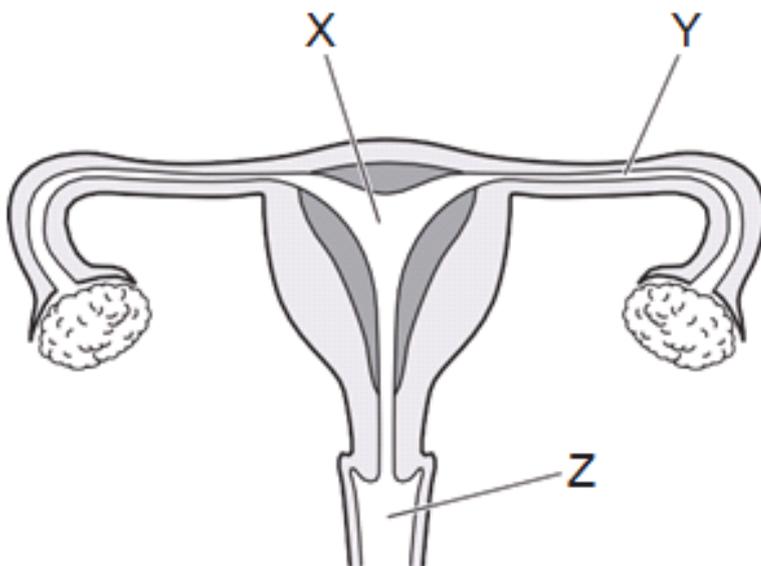
Which student has the correct comparison?

	size	movement	number
<b>A</b>	egg bigger	sperm mobile	usually one egg
<b>B</b>	sperm bigger	sperm not mobile	many eggs
<b>C</b>	egg bigger	sperm not mobile	one sperm
<b>D</b>	sperm bigger	sperm mobile	many sperm

8) How do male gametes compare with female gametes?

	size	move independently
<b>A</b>	larger	✓
<b>B</b>	larger	☹
<b>C</b>	smaller	✓
<b>D</b>	smaller	☹

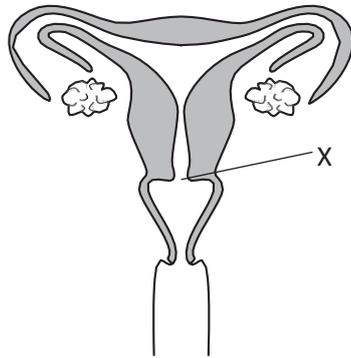
9) The diagram shows the female reproductive system.



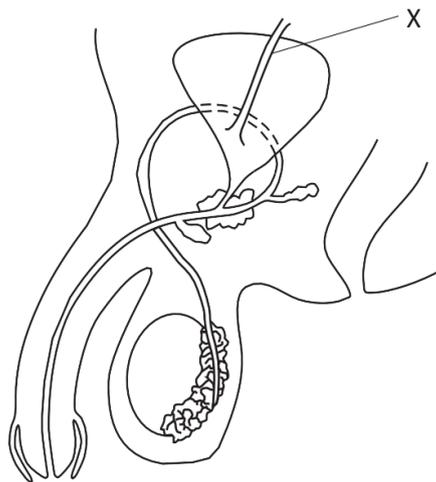
What are the functions of the parts labelled X, Y, and Z?

	X	Y	Z
<b>A</b>	development of fetus	release of female gametes	ring of muscle at opening of uterus
<b>B</b>	development of fetus	site of fertilisation	receives penis during intercourse
<b>C</b>	receives penis during intercourse	release of female gametes	ring of muscle at opening of uterus
<b>D</b>	receives penis during intercourse	site of fertilisation	development of fetus

- 10) The diagram shows a human female's reproductive organs.  
What is the name of structure X?



- A cervix
  - B ovary
  - C oviduct
  - D ovule
- 11) What are involved in reproduction in both animals and plants?
- A ovary and embryo
  - B ovary and testes
  - C ovule and stigma
  - D uterus and embryo
- 12) The diagram shows the male reproductive system.



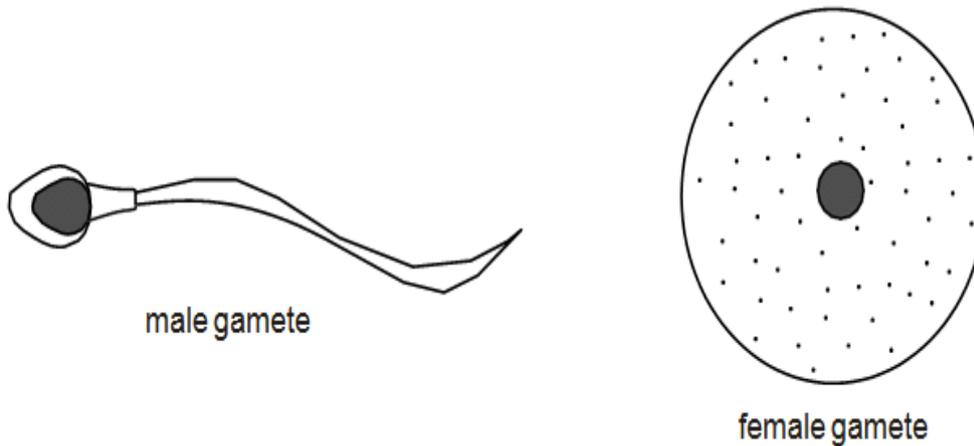
- What is the tube labelled X?
- A rectum
  - B sperm duct (vas deferens)
  - C ureter
  - D urethra

13) Which shows where eggs and sperms are made?

	eggs	sperms
<b>A</b>	fallopian tube (oviduct)	sperm duct
<b>B</b>	ovary	testis
<b>C</b>	ovary	urethra
<b>D</b>	uterus	testis

**PAPER-II**

Q1) Fig. 1.1 shows a male and a female gamete. They are not drawn to scale.



**Fig. 1.1**

- (i) The actual diameter of the female gamete is 100 micrometres.  
 Estimate a value for the length of the male gamete. .... micrometres [1]
- (ii) How many gametes are released in human  
 Male (during one time ejaculation).....  
 female (during one menstrual cycle)..... [2]
- (iii) State how the nucleus of the male gamete differs from the nucleus of a zygote.  
 .....  
 ..... [2]

- Q2. Draw neat and labelled diagrams of
- (i) Human female reproductive system [3]
  - (ii) Human male reproductive system [4]
  - (iii) Human Egg Cell [2]
  - (iv) Human sperm [3]

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<b>GRADE: IGCSE YEAR - 2</b>	<b>SUBJECT: BIOLOGY (0653)</b>	<b>DATE: 9.7.20</b>
<b>REVISION TEST-II</b>	<b>UNIT – B-11- Reproduction in humans</b>	
	<b>TOPIC- Ovulation, Fertilization, Implantation and Menstruation</b>	
<b>INSTRUCTION (IF ANY ):</b>	<b>Time 50 min MM: 25</b>	

**PAPER-1**

**MCQ [9X1=9 Marks]**

- 1) Which row describes the net diffusion of substances between the fetus and the mother across the placenta?

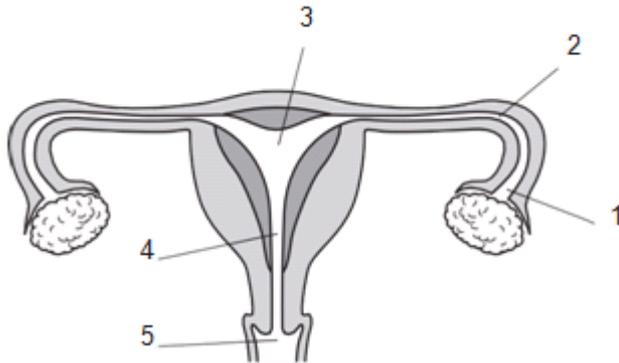
	from fetus to mother	from mother to fetus
A	carbon dioxide and glucose	oxygen and amino acids
B	carbon dioxide and waste products	oxygen and glucose
C	oxygen and glucose	carbon dioxide and amino acid
D	oxygen and waste products	carbon dioxide and glucose

- 2) A developing fetus is connected to its mother by an umbilical cord and placenta. What is the function of the placenta?
- A to allow the mixing of the mother's blood with the blood of the fetus
- B to exchange nutrients and waste
- C to keep the fetus warm
- D to stop the fetus from moving
- 3) In which region does diffusion of materials take place between mother and fetus?
- A amniotic sac
- B ovary
- C placenta
- D umbilical cord
- 4) Which structure is involved in the transfer of dissolved nutrients from the mother to the fetus?
- A kidney
- B liver
- C placenta
- D stomach

- 5) The diagram shows the human female reproductive system.  
After ejaculation, along which route does a male gamete travel to fuse with an egg?

- A ovary → oviduct → uterus → cervix
- B ovary → uterus → cervix → vagina
- C vagina → cervix → uterus → oviduct
- D vagina → uterus → cervix → oviduct

- 6) The diagram shows the female reproductive system.

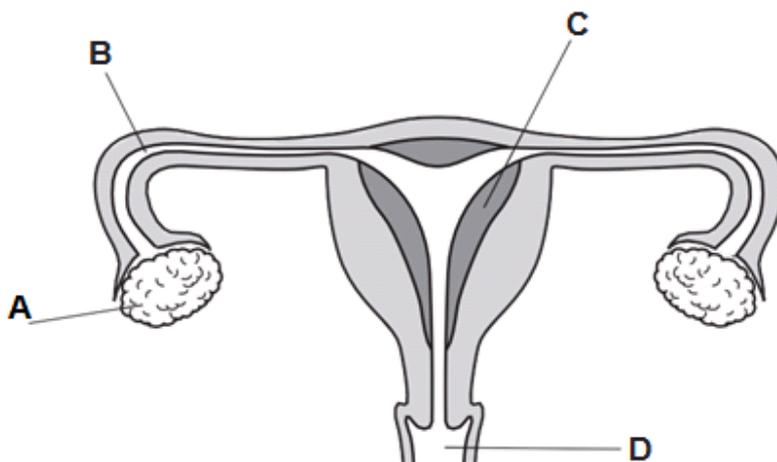


At which labelled points are sperms and ova released?

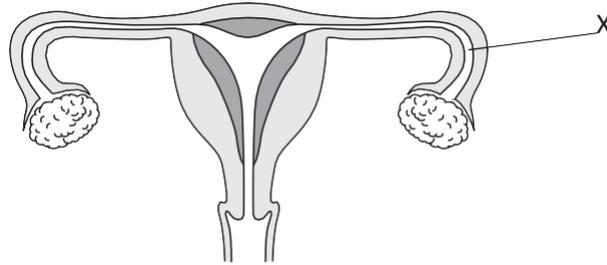
	sperms	ova
<b>A</b>	3	2
<b>B</b>	4	2
<b>C</b>	5	1
<b>D</b>	5	3

- 7) The diagram shows the female reproductive system.

Where does implantation normally occur?



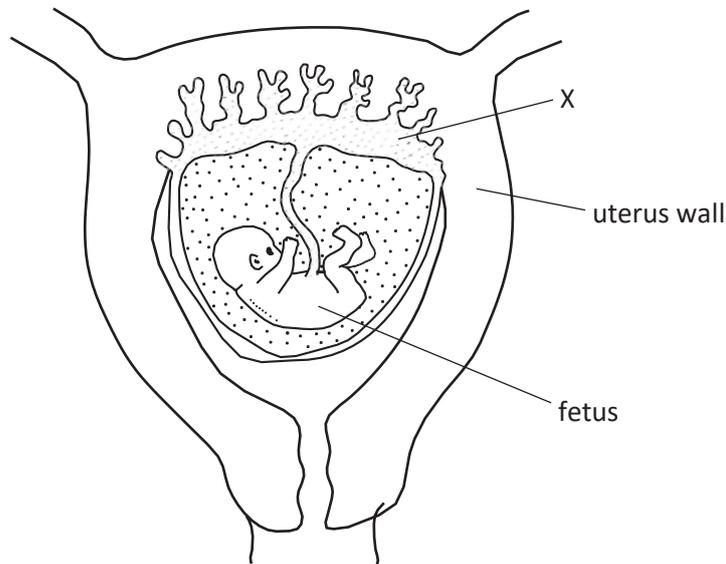
8) The diagram shows the human female reproductive system.



Sometimes a woman may be unable to have a baby because the tube at X becomes blocked. Which processes are prevented?

	fertilisation	implantation	ovulation	
A	✓	✓	✓	key ✓ = prevented ☹ = not prevented
B	✓	✓	☹	
C	☹	✓	✓	
D	✓	☹	✓	

9) The diagram shows a developing human fetus within the uterus.

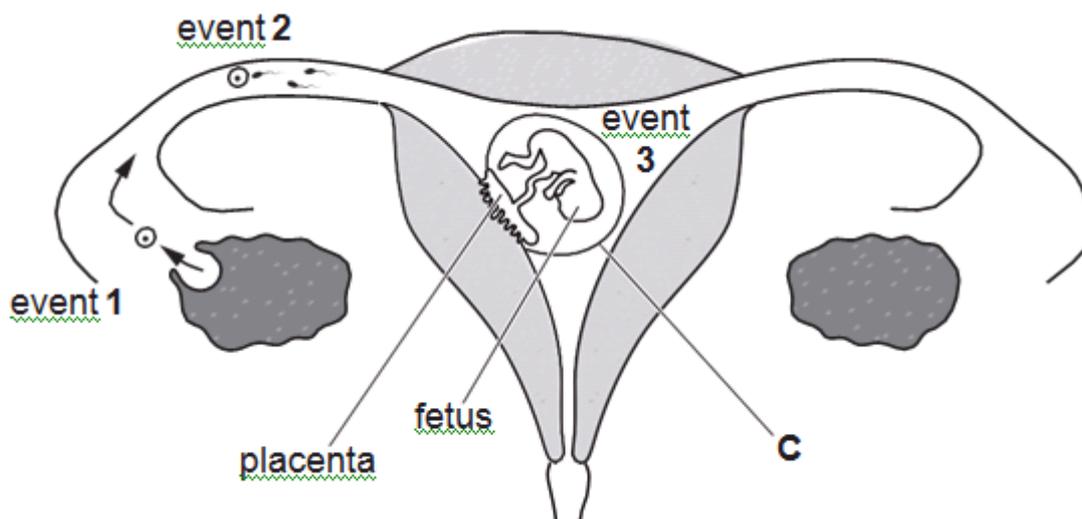


What is a main function of X?

- A passing faeces to the mother
- B passing oxygen to the fetus
- C passing the mother's blood to the fetus
- D protecting the fetus from knocks

**PAPER-II**

**Q1)** Fig. 1.1 shows a diagram of the female reproductive system and some events that take place before and during early pregnancy. The fetus is the name for the developing baby.



**Fig. 1.1**

(a)(i) State what happens during events 1,2 and 3.

- event 1 .....
- event 2 .....
- event 3.....[3]

(ii) Name structure C in Fig. 1.1 and state its function.

- name of C .....
- function of C .....
- .....[2]

(b) Exchange of substances between blood in the fetus and the mother’s blood takes place at the placenta. Some materials that are transferred across the placenta are shown.

- amino acids**                      **carbon dioxide**                      **fatty acids**                      **glucose**                      **oxygen**

(i) Name **one** substance from the list that shows net movement **from** the fetus into the mother’s blood.  
 .....[1]

(ii) state the source of this substance in the fetus.  
 .....  
 .....[1]

(iii) Describe how the blood in the fetus reaches the placenta.

.....[2]

(C) Fig. 1.2 shows a fetus (growing baby) in a mother's uterus during pregnancy.

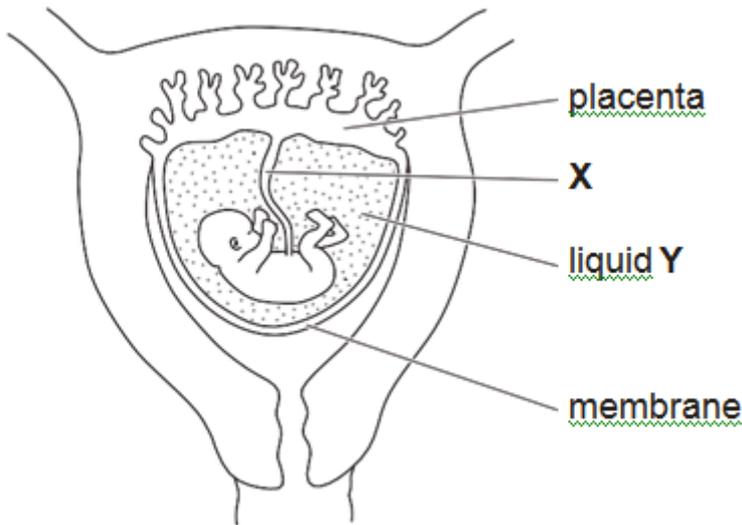


Fig 1.2

(i) Name X and Y shown on Fig. 1.2.

X .....

Y .....[2]

(ii) The fetus obtains the materials it needs from the placenta.

State **one** substance which diffuses from the mother's blood into the placenta,

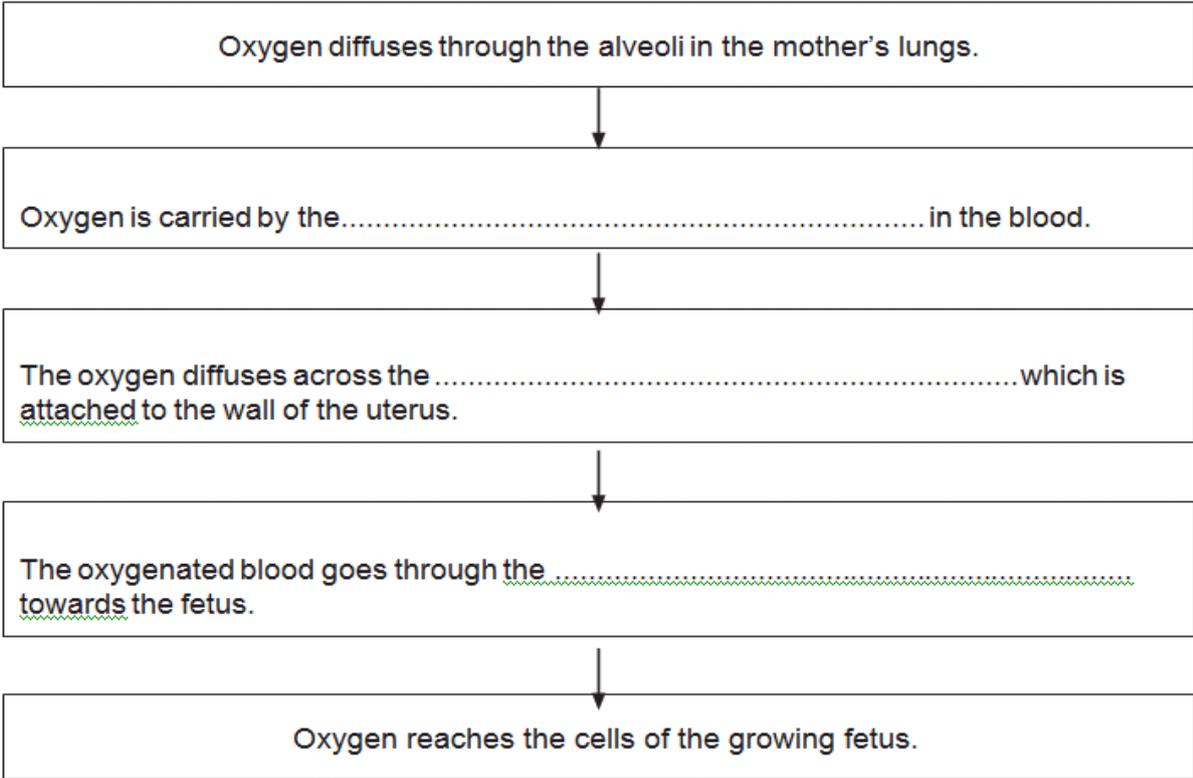
.....[2]

Q2) (a) A fetus is the name given to a developing baby in the later stages of pregnancy.

Use the following words or phrases to complete the flow chart about the supply of oxygen to a growing fetus.

Each word or phrase may be used once, more than once or not at all.

- |                        |                  |                       |                          |
|------------------------|------------------|-----------------------|--------------------------|
| <b>amniotic fluid</b>  | <b>diaphragm</b> | <b>placenta</b>       | <b>plasma</b>            |
| <b>red blood cells</b> | <b>trachea</b>   | <b>umbilical cord</b> | <b>white blood cells</b> |



[3]

 Cambridge Assessment International Education	 <b>SANSKAR SCHOOL</b> <i>The Revival of Tradition</i>	
GRADE: IGCSE YEAR - 2	SUBJECT: BIOLOGY (0653)	DATE: 14.7.20
WORKSHEET NUMBER: 4	UNIT – B-11- Reproduction in humans WORKSHEET TOPIC(S): B11.04-HIV/AIDS	
INSTRUCTION (IF ANY):	Do the questions in notebook.	

**SUBMISSION DATE OF H.W.- 15.7.20**

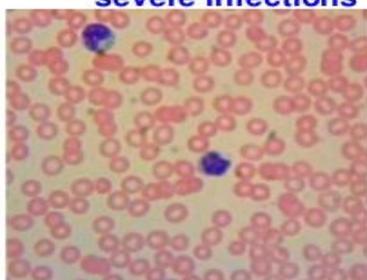
## CLASS ASSIGNMENT

### KEY TERMS

- 1) Sexual intercourse
- 2) AIDS - Acquired Immune Deficiency Syndrome
- 3) HIV – Human Immunodeficiency Virus
- 4) Pathogens
- 5) Vulnerable
- 6) Pneumonia
- 7) Transmission
- 8) Homosexual
- 9) Transfusion
- 10) Screened
- 11) Hypodermic
- 12) Paramedics
- 13) Antiretroviral

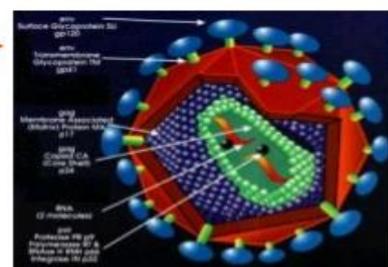
## What are HIV and AIDS

- HIV means Human immunodeficiency Virus.
- AIDS means Acquired immuno Deficiency Syndrome.
- HIV is a virus that causes AIDS.
- HIV attacks lymphocytes (White Blood Corpuscles). As a result the body has difficulty to fight against certain pathogens like bacteria, viruses, fungi and other microbes.
- AIDS is a state in which a person's immunity to fight against diseases is completely destroyed. Then he / she is affected by severe infections



HIV VIRUS →

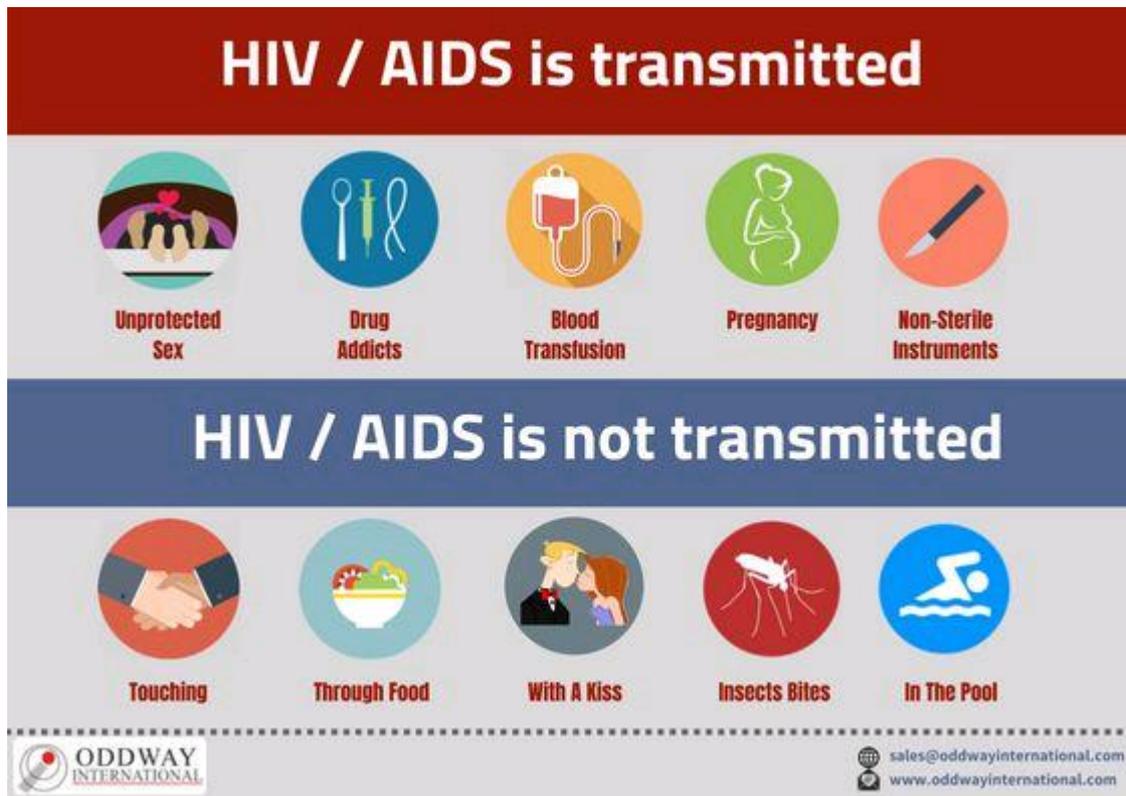
← LYMPHOCYTES



Q1) What is the full form of AIDS?

Q2) What is the full form of HIV?

Q3) How HIV causes AIDS?



Q4) How is HIV transmitted?

Q5. How is HIV not transmitted?

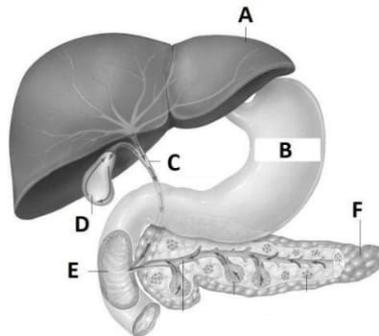
Q6. Mention the ways in which HIV/AIDS can be prevented from spreading?

### HOME ASSIGNMENT

Do Q5-page no. 155 of coursebook.

<b>GRADE:IGCSE YEAR 2</b>	<b>SUBJECT: BIOLOGY</b>	<b>DATE: 07 AUG 2020</b>
<b>WORKSHEET NUMBER:1</b>	<b>WORKSHEET TOPIC: COORDINATION AND HOMEOSTASIS</b>	
<b>INSTRUCTION (IF ANY ):</b>	<b>DO THE ANSWERS IN YOUR NOTEBOOK</b>	

1. Define stimulus
2. Differentiate between sensory neuron, motor neuron and relay neuron.
3. Write difference between voluntary and involuntary actions.
4. Write functions of the following parts of eye: (i) retina (ii) iris (iii) cornea  
(iv) pupil (v) ciliary muscles.
5. Define tropic movements.
6. Give the various functions performed by plant hormones.
7. How does phototropism occur in plants?
8. How is gravitropism different from phototropism?
9. A shoot is illuminated from one side only. What collects on the dark side of the shoot?  
**A** auxin  
**B** chlorophyll  
**C** glucose  
**D** starch
10. The given figure shows part of the alimentary canal and associated organs.



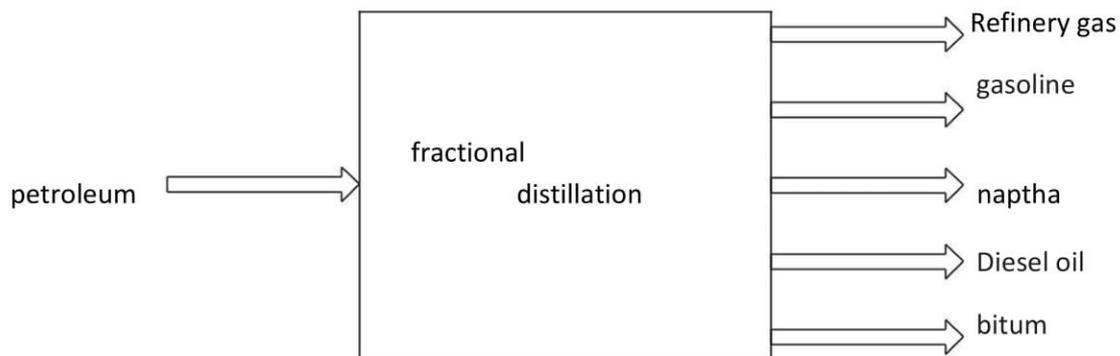
- (i) Label the parts A, D and F.
- (ii) Some people need to have their pancreas removed due to illness. Describe how removing the pancreas may affect the person's digestion.
- (iii) Place ticks in two boxes to show correct idea about hormones.

Alter the activity of organs	<input type="checkbox"/>
HIV is one example of hormone	<input type="checkbox"/>
They are chemical substances	<input type="checkbox"/>
Produced by target organs	<input type="checkbox"/>
Transported in red blood cells	<input type="checkbox"/>

11. Petroleum (crude oil) is a mixture of compounds.

It can be separated into fractions by fractional distillation.

(a) Figure shows some of the fractions obtained by fractional distillation.



The fractions have different boiling point ranges.

Describe how and why the properties of these fractions differ from each other.

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<b>GRADE:IGCSE YEAR 2</b>	<b>SUBJECT: BIOLOGY</b>	<b>DATE: 14 AUG 2020</b>
<b>WORKSHEET NUMBER:2</b>	<b>WORKSHEET TOPIC: COORDINATION AND HOMEOSTASIS</b>	
<b>INSTRUCTION (IF ANY ):</b>	<b>DO THE ANSWERS IN YOUR NOTEBOOK</b>	

1. (a) The nerve fibres which carry impulses from the sense organs to the central nervous system are called ..... A ..... fibres.  
(b) The nerve fibres which carry impulses from the central nervous system to the glands and muscles are called ..... B ..... fibres.
  
2. Complete the passage below, selecting the most appropriate words from the list below.  

In a spinal reflex a .....A .....is stimulated to produce a nerve impulse which travels in a ..... B ..... fibre to the ..... C ..... Here, the nerve fibre makes a .....D ..... with a relay (association) ..... E .....which transmits the impulse to a ..... F ..... fibre. This fibre conducts the impulse to an .....G ..... organ such as muscle.

*(effector, tendon, sensory, sense organ, motor, nerve, brain, spinal cord, active, synapse, neuron)*
  
3. Adrenaline is often secreted during sporting competitions. Outline how adrenaline affects the performance of a swimmer.
  
4. Explain the role of auxin in the responses of the roots and stems.

 Cambridge Assessment International Education		
<b>GRADE:IGCSE YEAR 2</b>	<b>SUBJECT: BIOLOGY</b>	<b>DATE: 17 AUGUST 2020</b>

<https://forms.gle/W3phCU68DoHrVxz87>