પુ·ના International School

Shree Swaminarayan Gurukul, Zundal

PERIODIC ASSIGNMENT 3- 20221-22	
Grade – 7	Subject-SCIENCE
Syllabus – CH-10,11,12	FROM TEXTBOOK

❖ **Multiple Choice Questions :-**

(1) In cockroaches, air enters the body through
(a) lungs (b) gills **(c) spiracles** (d) skin

(2) During heavy exercise, we get cramps in the legs due to the accumulation of
(a) Carbon dioxide **(b) lactic acid** (c) Alcohol (d) water

(3) Normal range of breathing rate per minute in an average adult person at rest is:
(a) 9-12 **(b) 15-18** (c) 21-24 (d) 30-33

(4) During exhalation, the ribs
(a) move outwards **(b) move downwards** (c) move upwards (d) do not move at all.

(5) In plants, water is transported through
(a) Xylem (b) Phloem (c) Stomata (d) Root hair

(6) Water absorption through roots can be increased by keeping the plants
(a) in the shade (b) in dim light. **(c) under the fan** (d) covered with a polythene bag.

(7) The reproductive part of a plant is the
(a) Leaf (b) Stem (c) Root (d) Flower

(8) The process of fusion of the male and female gametes is called
(a) Fertilisation (b) Pollination (c) Reproduction (d) Seed formation

(9) Mature ovary forms the
(a) Seed (b) Stamen (c) Pistil **(d) Fruit**

(10) A spore producing plant is
(a) Rose **(b) Bread mould** (c) Potato (d) Ginger

(11) Bryophyllum can reproduce by its
(a) Stem **(b) Leaves** (c) Roots (d) Flower

(12) Fish breathe with the help of gills which are richly supplied with blood vessels. The gills help the fish to:

(a) take in carbon dioxide dissolved in water. **(b) take in oxygen dissolved in water.**

(c) absorb nutrients present in water. **(d)** release waste substances in water.

(13) Earthworms and frogs breathe through their skin because of which the skin of both the organisms is:

(a) moist and rough. **(b)** dry and rough.

(c) dry and slimy. **(d) moist and slimy.**

(14)The absorption of nutrients and exchange of respiratory gases between blood and tissues takes place in

(a) veins (b) arteries (c) heart **(d) capillaries**

(15) In which of the following parts of human body are sweat glands absent ?

(a) Scalp (b) Armpits **(c) Lips** (d) Palms

(16) In a tall tree, which force is responsible for pulling water and minerals from the soil?

(a) Gravitational force (b) Transportation force
(c) Suction force (d) Conduction force

(17) Aquatic animals like fish excrete their wastes in gaseous form as -

(a) Oxygen (b) Hydrogen **(c) Ammonia** (d) Nitrogen

(18) Lila observed that a pond with clear water was covered up with a green algae within a week. By which method of reproduction did the algae spread so rapidly ?

(a) Budding (b) Sexual reproduction **(c) Fragmentation** (d) Pollination

(19) Seeds of drumstick and maple are carried to long distances by wind because they possess

(a) winged seeds (b) large and hairy seeds (c) long and ridged fruits (d) spiny seeds

(20) The 'eye' of the potato plant is what

(a) the root is to any plant. (b) the bud is to a flower.
(c) the bud is to Bryophyllum leaf. (d) the anther is to stamen.

❖ **Fill in the blanks.**

(1) The blood from the heart is transported to all parts of the body by the **arteries**.
(2) Hemoglobin is present in **red blood** cells.
(3) Arteries and Veins are joined by a network of **capillaries**.
(4) The rhythmic expansion and contraction of the heart is called **heart beat**.
(5) The main excretory product in human beings is **urea**.
(6) Sweat contains water and **salts**.
(7) Kidney eliminates the waste materials in the liquid form called **urine**.
(8) Water reaches great heights in the trees because of suction pull caused by **transpiration**.

(9) Production of new individuals from the vegetative part of parent is called **vegetative propagation**.

(10) A flower may have either male or female reproductive parts. Such flower is called **unisexual flowers**.
(11) The transfer of pollen grains from the anther to stigma of the same or of another flower of the same kind is known as **pollination**.
(12) The fusion of male and female gametes is termed as **fertilisation**.
(13) Seed dispersal takes place by means of **wind, water** and **animals**.

(14) The leaves of plants have small pore called **stomata**.
(15) The larynx is also called **voice box**.

❖ **Match the following**

Column I	Column II
(a) Yeast	(i) Earthworm
(b) Diaphragm	(ii) Gills
(c) Skin	(iii) Alcohol
(d) Leaves	(iv) Chest cavity
(e) Fish	(v) Stomata
(f) Frog	(vi) Tracheae

Answer: (a) (iii) (b) (iv) (c) (i) (d) (v) (e) (ii) (f) (vi)

Column I	Column II
(i)Stomata	(a)Absorption of water
(ii) Xylem	(b) Transpiration
(iii) Root hairs	(c) Transport of food
(iv) Phloem	(d) Transport of water
	(e) Synthesis of carbohydrates.

Answer: (i) (b) (ii) (d) (iii) (a) (iv) (c)

Column I	Column II
(a) Bud	(i) Maple
(b) Eyes	(ii) Spirogyra
(c) Fragmentation	(iii) Yeast
(d) Wings	(iv) Bread mould
(e) Spores	(v) Potato
	(vi) Rose

Answer: (a) (iii) (b) (v) (c) (ii) (d) (i) (e) (iv)

❖ **Short Question Answer**

1. What are the end products of aerobic respiration.

Ans. During aerobic respiration, carbon dioxide and water are released along with a large amount of energy.

Glucose + O2 ------- CO2 + Water + Energy

2. Whenever we feel drowsy or sleepy, we start yawning. Does yawning help us in anyway?

Ans: During drowsiness, our breathing rate slows down. The lungs do not get enough oxygen from the air resulting in yawning. Yawning brings extra oxygen into the lungs and helps us to keep awake.

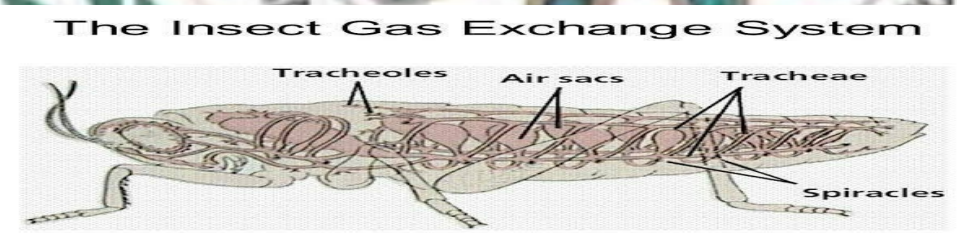
3. Insects and leaves of a plant have pores through which they exchange gases with the atmosphere. Can you write two points of differences between these pores with respect to their position, number and extension into the body?

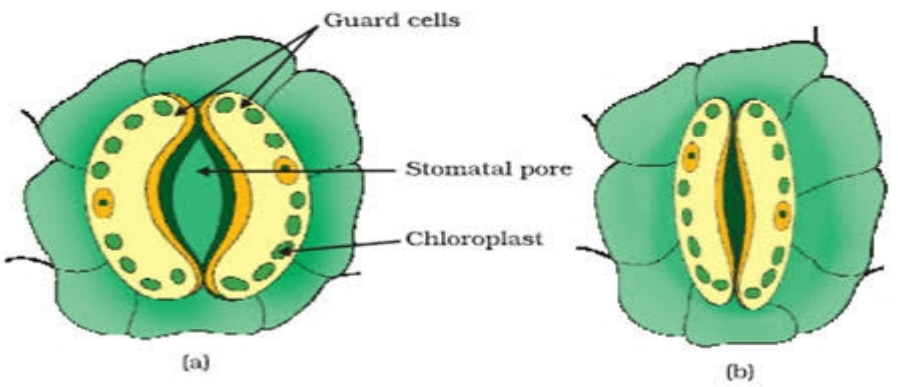
Ans: The differences between the pores of insects and leaves of a plant with respect to their position, number and extension into the body are as follows:-

(i) Spiracles are present on the sides of insects' body while stomata are present on the lower surface of the leaves.

(ii) Spiracles are fewer in number as compared to stomata.

(iii) Spiracles lead to an extensive network of tracheal system which is absent in the leaves.





4. **Why do we often sneeze when we inhale a lot of dust-laden air?**
Answer: The air around us has various types of unwanted particles, such as smoke, dust, pollen etc. when we inhale; the particles get trapped in the hair present in our nasal cavity. Sometimes these particles enter the nasal cavity and create irritation that leads to sneezing.

5. (a) Name the only artery that carries carbon dioxide-rich blood.

(b) Why is it called an artery if it does not carry oxygen-rich blood ?

Ans: (a) Pulmonary artery is the only artery that carries carbon dioxide-rich blood.

(b) It does not carry oxygen-rich blood but it is called an artery because arteries carry blood away from the heart and Pulmonary artery also carry blood away from the heart.

6. Name the process and the organ which helps in removing the following wastes from the body.

(a) Carbondioxide

(b) Undigested food

(c) Urine

(d) Sweat

Ans: Process - Organ

(a) exhalation - lungs

(b) egestion - large intestines and anus

(c) excretion - kidneys

(d) perspiration - sweat glands

7. Observe Figure 11.2 and answer the given questions:

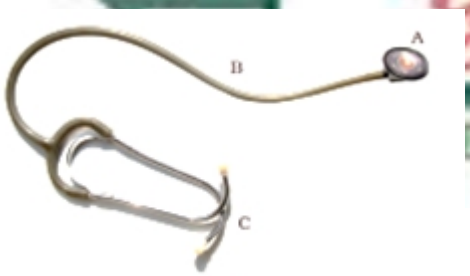


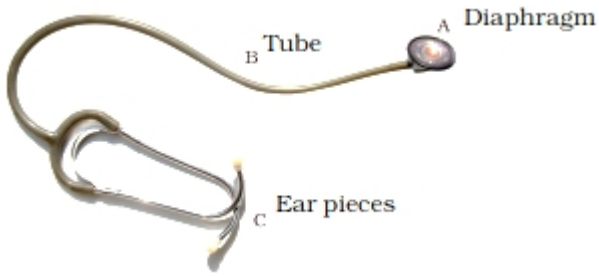
Fig 11.2

(a) Name the instrument.

(b) Label the parts A, B and C.

Ans: (a) The given instrument is stethoscope.

(b)



8. Why is transport of materials necessary in a plant or in an animal? Explain.
Answer: In plants and animals the transport of materials is necessary. It can be explained as below:
(i) Animals need to transport food and water from intestine and oxygen from lungs to all other body parts.
(ii) Animals need to transport the wastes from where they are produced to parts from where they can be removed.
(iii) Plants need to transport the food from leaves, water and minerals to all other parts of the plant.

9. What will happen if there are not platelets in the blood?
Answer: Blood cannot clot without the platelets help in the clotting of blood at the time of injury with bleeding.If there is no platelets, then there would be no clotting of blood and ultimately the person may die due to excess of flow of blood.

10. What are stomata? Give two functions of stomata.
Answer: Small pores in leaves of plant are called stomata.

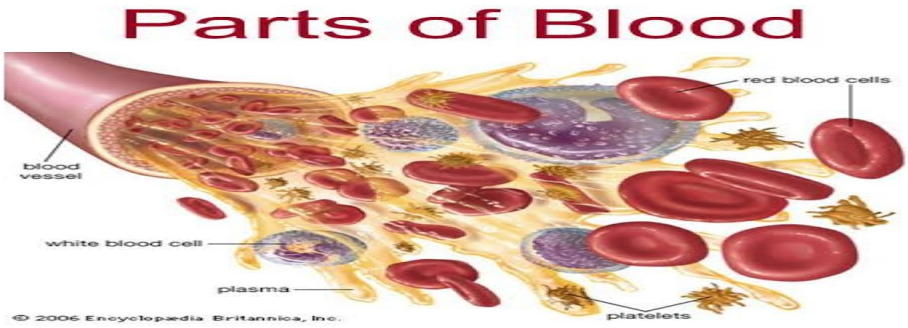
Functions of stomata-

(i) Exchange of carbon dioxide and oxygen.
(ii) Transpiration to remove excess of water.

11. What are the components of blood?

Answer: The main component of blood cells are:

Red blood cells (RBC), white blood cells (WBC), platelets and plasma.



12. Why blood needed by all the parts of a body?

Answer: Blood is needy by all the parts of a body because:
(i) It carries oxygen to all the parts of the body and also carries carbon dioxide back to the lungs.
(ii) It carries digested food to various parts of the body for absorption.
(iii) It contains platelets which help in the clotting of blood.
(iv) It helps in maintaining constant body temperature.
(v) It transports hormones and help in fighting the body with germs and bacteria.

13. In the diagram given in Figure 12.2 label the parts marked (a), (b) and (c).

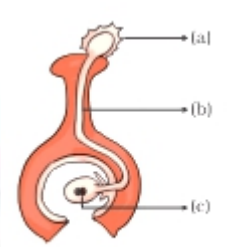
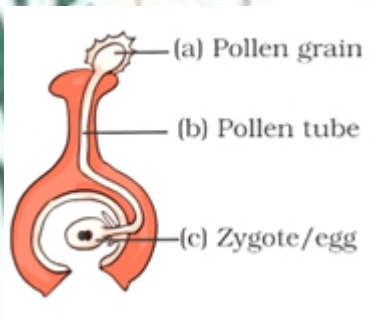


Fig. 12.2

Ans:



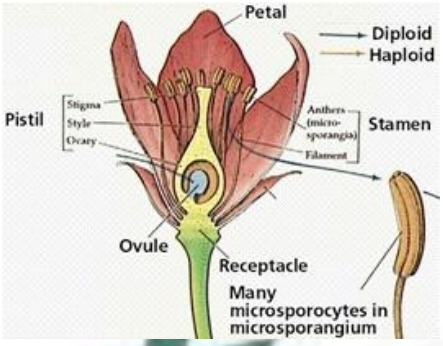
14. When you keep food items like bread and fruits outside for a long time especially during the rainy season, you will observe a cottony growth on them.

(a) What is this growth called?
(b) How does the growth take place?

Ans:(a) It is bread mould, a fungus.
(b) They develop from spores.

15. Sketch the reproductive parts of flower.

Answer:



16. Explain the difference between self-pollination and cross-pollination.

Answer:

Self - Pollination	Cross – Pollination
Pollen of a flower reaches to the stigma of same flower	The transfer of pollen grains from the anthers of a flower to the stigma of another flower on a different plant of the same species
No pollinating agent is required	Pollinating agent like wind, air or insects are required
Occurs only in bisexual flowers	Occurs in unisexual flower
It does not lead to genetic variation in the progeny	It leads to genetic variation in the progeny

17. Describe the various ways by which seeds are dispersed.

Answer: Dispersal of seed takes place by various means such as wind, water, insects, animals and birds. The seeds dispersed by wind are light and smaller in size. So, that it may be carried by wind easily. The water dispersed seeds are generally floating in nature. Spiny seeds with hooks are generally carried by animal's body. The birds disperse the seed to faraway places by eating fruit, they excrete with digesting the seeds.

❖ **Long Questions Answers:-**

1. Paheli participated in a 400m race competition held at her school and won the race. When she came home she had mixed feelings of joy and pain as she had cramps in her leg muscles. After a massage she was relieved of the pain. Answer the following questions related to the situation.

(a) What can be the possible reasons for the pain in her legs?

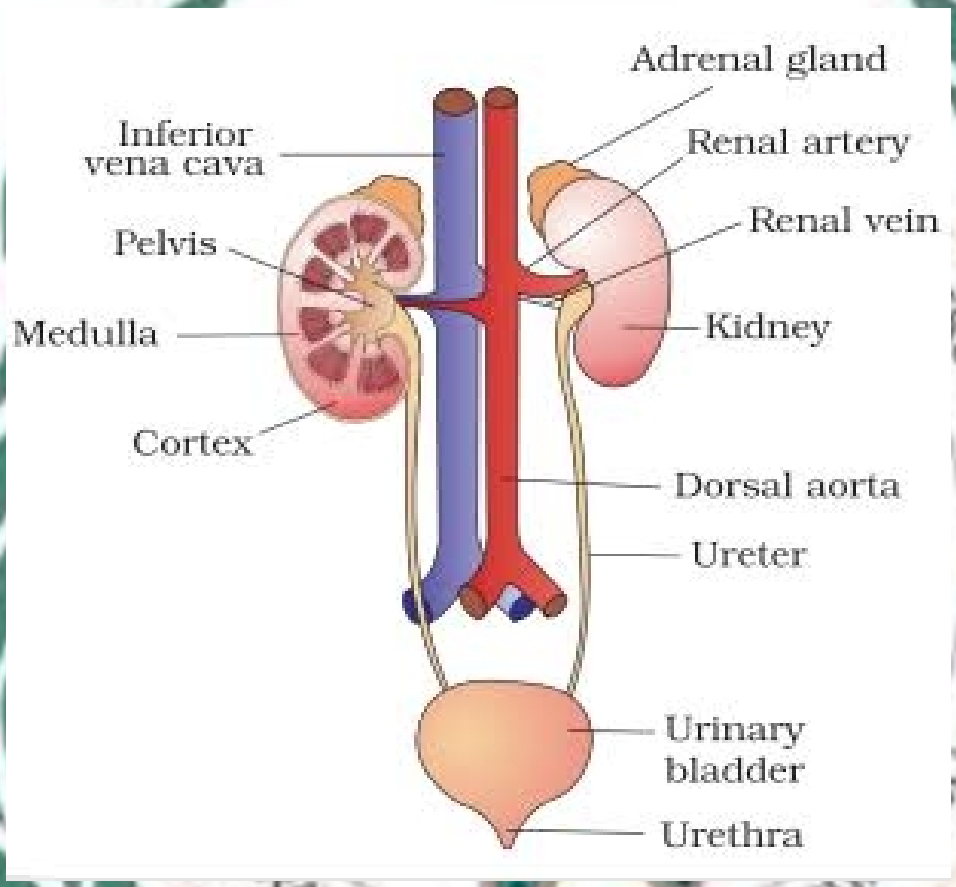
(b) Why did she feel comfortable after a massage?

Ans: (a) Paheli might not have focused on her breathing during the race. The possible reason for pain in her legs could be the accumulation of lactic acid in her muscles. During heavy exercise or running, the muscle cells respire anaerobically due to insufficient supply of oxygen and produce lactic acid.

(b) The massage improved the circulation of blood leading to increased supply of oxygen to the muscle cells. The increased oxygen supply helped in complete breakdown of lactic acid into CO_2 and water. Hence, she felt comfortable after the massage.

2. Draw a diagram of the human excretory system and label the various parts.

Answer:



3. Describe the functions of the heart.

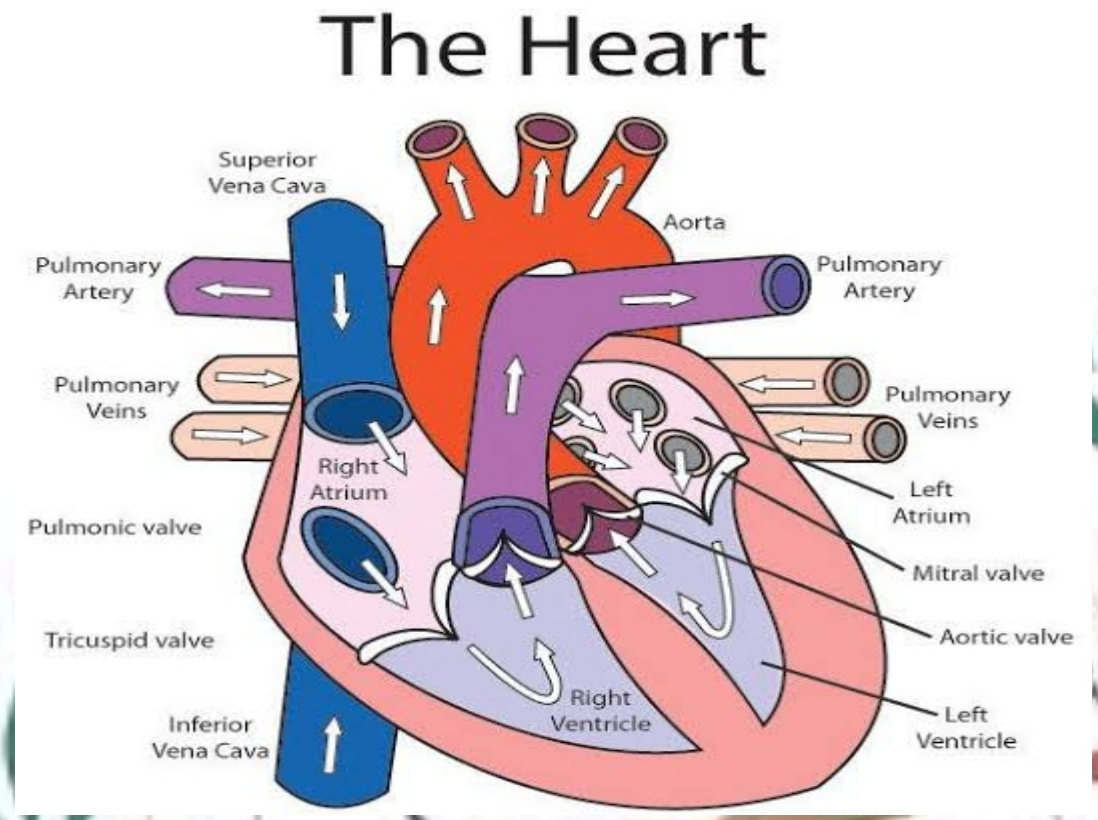
Answer: Functions of the heart:

(i) It helps in the circulation of oxygen rich blood throughout the body by the pumping.

(ii)It receives oxygenated blood from the lungs.

(iii) It also pumps back the blood carrying carbon dioxide to the lungs.

(iv) It shows rhythmic contraction and relaxation for movement of blood.



4. In the figure (12.4) of a flower , label the parts whose functions are given below and give their names.

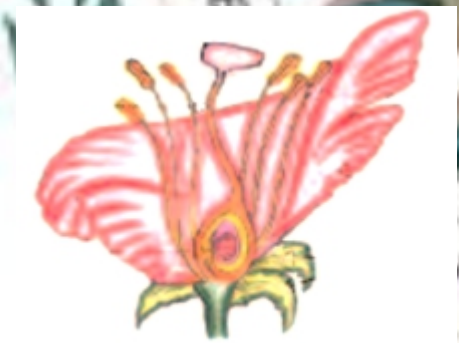
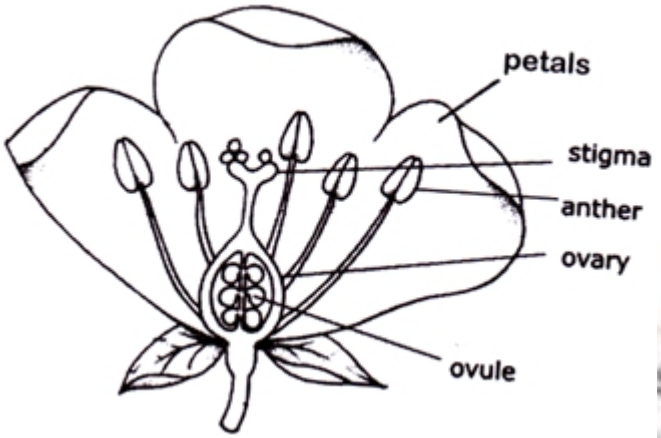


Fig 12.4

(a) The part which contains pollen grains.
(b) The part where the female gamete is formed.
(c) The female reproductive part where pollen grains germinate.
(d) The colourful part of flower which attracts insects.

Ans:


petals
stigma
anther
ovary
ovule