FOR GOD AND COUNTRY

ST.LAWRENCE HIGH SCHOOL

3rd TERM EXAMINATION-2019

CLASS-VI

SUBJECT: GENERALSCIENCE | F.M. : 90

DURATION: 2HRS 30MINS | DATE: 22.11.2019

SECTION-A **(25marks)**

A. CHOOSE THE CORRECT OPTION: **(1X5=5)**

1. The _____ is said to be freely permeable and allows all substances to enter and leave the cell.
   (a)cell wall
2. In some plants with weak stems, the leaves are modified to slender, wiry, coiled structures known as _____.
   (b) tendrils
3. Liquids which do not mix with each other is said to be _____.
   (c)immiscible
4. The liquid above the sediment is called _____ liquid.
   (a) supernatant
5. When an object rolls on a surface, the friction produced between the object and the surface is called _____ friction.
   (c)rolling

B. FILL IN THE BLANKS: **(1X5=5)**

1. The standard unit of mass in SI system is **kilogram**.
2. A force applied to an object by another object that is not in direct contact with it is called a **non-contact** force.
3. A small pore found below the hilum is called **micropyle**.
4. A dense semifluid substance present inside the nucleus is called **nucleoplasm**.
5. An atom is the smallest part of an **element** that takes part in a chemical reaction.

C. STATE WHETHER THE FOLLOWING STATEMENT IS TRUE OR FALSE: **(1X5=5)**

1. Measuring tape is an instrument used for measuring the temperature. **False**
2. A liquid can be compressed only to a small extent. **True**
3. Lead combines with iodide to form the yellow lead iodide. **True**
4. In 1800, Antoni Van Leeuwenhoek discovered the presence of single-celled organism in a drop of water. **False**
5. The false fruits develop not only from the ovary but also from the other parts as well. **True**

D. NAME THE FOLLOWING: **(1X5=5)**

1. The food is being mixed with the extraneous material to increase the quantity of the product and to make a profit. **Food Adulteration**
2. The word "cell" was coined by? **Robert Hooke**
3. A substance that can be split into simpler substances by chemical means. **Compounds**
4. The interval between two events. **Time**
5. Name the plastid found in flowers. **Chromoplast**

E. MATCH THE COLUMNS : **(1X5=5)**

COLUMN A	COLUMN B
1. Bisexual flowers	**Androecium and gynoecium**
2. Leucoplasts	**Seeds**
3. Lead	**Pb**
4. 1 quintal	**100 kg**
5. Gaseous to liquid	**liquefaction**

SECTION-B (25marks)

F. ANSWER THE FOLLOWING QUESTIONS: (2X5=10)

1. What would happen if the soil had not contained air?(2)

Ans: If the soil had not contained air, no organisms could have survived in it. Earthworms and insects in the soil increase the fertility of the soil and plants would not grow as their roots would not get oxygen. So all the above mentioned organisms would all be absent from the soil and the absence of plants would bring all life on earth to an end.

2. What is Inflorescence?(2)

Ans: Some flowers, which are generally small, grow in a group of cluster that is arranged on the stem in a specific pattern. The flower cluster and its arrangement on a plant are called inflorescence.

3. Convert 20 m to cm.(2)

Ans: Since 1m=100 cm

20m = 20 x 100 cm = 2000 cm

4. What is Magnetic separation?(2)

Ans: Magnetic Separation is the process of separating components of mixtures by using magnets to attract magnetic materials. The process that is used for magnetic separation detaches non-magnetic material with those who are magnetic.

5. Write any 2 differences between the plant cell and animal cell.(2)

Ans:

S.no	Animal cell	Plant cell
1.	It is enclosed by a rigid cell wall	There is no cell wall
2.	It contains plastids	It does not have plastids
3.	A mature cell has one or a few large vacuoles	Vacuoles are not found in all animal cells. When present, they are small.

G. SHORT ANSWER TYPE QUESTIONS: (attempt any 5 out of 7) (3X5=15)

1. Mention the 3 causes of indigestion.(3) (any 3)

Ans: It can be caused by some diseases or some medicines such as aspirin. It can also be caused by bad habits such as eating too fast without chewing properly, overeating, eating spicy, greasy or fatty food, drinking too much alcohol and smoking.

2. Give any 3 respiratory diseases with their causes.

Ans: Common cold, bronchitis, tuberculosis: spread through direct contact. Some diseases like Asthma is usually caused by a reaction to substances such as pollen, fur, feathers,mould, perfume, smoke and dust. Lung cancer is caused by direct and passive smoking and also because of air pollution.

3. Differentiate between external and internal respiration.(3)

Ans:

S.no	External Respiration	Internal Respiration
1.	It is a physical process in which oxygen is taken in and carbon dioxide is given out.	It is a biochemical process in which oxygen combines with food.
2.	It takes place outside the cell.	It takes place inside the cell.
3.	No energy is released from food.	Food is broken down to release energy.

4. Write down the uses of Nitrogen.(3) (any 3)

Ans: Nitrogen is essential for plants and animals alike. Plants get nitrogen from the air and animals get nitrogen from plants through complicated reactions. Proteins, which are so essential for all living beings, are nitrogen-containing compounds. Enzymes that make chemical reactions occur in a biological system and hemoglobin which is the main constituent of blood are proteins.

5. Define the following: (3)

a) Transparent object : **The object is said to be Transparent when the light can pass through the object completely.**

b) Translucent object : **The object is said to be translucent when only a part of the light is transmitted and the rest is absorbed or scattered.**

c) Opaque object : **The object is said to be opaque when the light does not pass through the object, it is either reflected or absorbed by the object.**

6. What is blood pressure and how it can be measured? (2+1)

Ans: The circulation of blood exerts a pressure on the walls of the blood vessels. This pressure is known as blood pressure. The doctor measures the arterial pressure, or the pressure of blood on the walls of the arteries. Blood pressure can be measured using an instrument called sphygmomanometer.

7. What is Mitochondria?(3)

Ans: Mitochondria is an organelle helps in breaking down glucose and convert its energy into a form that can be used easily by the cell to power all its functions. That is why, Mitochondria is called "the power house of the cell".

SECTION-C **(40marks)**

H. <u>EXPLAIN IN BRIEF:</u> (attempt any 8 out of 10, in which Q.no.8 is compulsory) **(5X8=40)**

1. Draw the table that shows the different enzymes secreted in the Human Digestive system, their site of action and functions.(5)

Ans:

Site of Action	Enzymes and other secretions	Functions
Mouth	Salivary amylase	Converts starch to sugars
Stomach	Hydrochloric acid	Makes food acidic to allow gastric enzymes to act on it.
	Gastric Lipase	Breaks down fats into simpler molecules
Stomach	Pepsin	Breaks down proteins into

		Peptides
Small Intestine	Bile	Makes chyme alkaline so that intestinal enzymes can act on it and helps break down fat globules into tiny droplets
	Pancreatic Amylase	Converts starch into maltose and other sugars
	Trypsin	Converts Protein into peptides
	Pancreatic Lipase	Converts fats into fatty acids and glycerol
	Peptidases	Convert peptides into amino Acids
	Maltase and other enzymes	Convert maltose and other sugars into glucose

2. Mention any 5 Functions of blood.(5)

Ans:

- **It transports digested food from the small intestine to the cells and to the sites where it is stored, for example, the liver.**
- **The RBCs in the blood carry oxygen from the lungs to the cells and carbon dioxide from the cells to the lungs.**
- **Blood carries waste products generated in the cells to the excretory organs.**
- **It transports hormones from the sites where they are produced to the areas where they are required.**
- **The WBCs in the blood help to fight against infections.**
- **Blood platelets cause the clotting of blood in case of an injury and help to prevent excessive loss of blood.**
- **Blood helps to regulate the balance of water in the body.**
- **It also helps to regulate the body temperature.**

3. Mention the differences between the 3 types of blood cells. (any 5 characteristics) (5)

Ans:

Characteristics	RBCs	WBCs	Platelets
Shape	Disc shaped	No definite shape	Minute, disc Shaped
Count	5-6 million/mm^3	Less than RBCs	150,000-400,000/ mm^3
Colour	Red	Colourless	Shades of red
Nucleus	A mature RBC has no nucleus	Have nucleus	No nucleus
Life span	120 days	Shorter life span than RBCs	8-9 days
Function	Transport oxygen and carbon dioxide	Defend the body against infection	Clotting of blood

4. Describe the Circulation of blood in the Human body.(5)

Ans:

- **The deoxygenated blood is collected from the anterior and the posterior parts of the body with the help of superior and inferior vena cava.**

- The deoxygenated blood then enters the right auricle and then the blood is pumped into the right ventricle with the help of tri-cuspid valve.
- From the right ventricle, the deoxygenated blood is been sent to the lungs with the help of pulmonary artery.
- Once the deoxygenated blood gets purified in the lungs, it reaches the left auricle of the heart with the help of pulmonary veins.
- From the left auricle, the oxygenated blood is been sent to the left venricle with the help of Bi-cuspid valve. And from the left ventricle, the oxygenated blood is been pumped into all parts of the body with the help of Aorta.

5. Write any 5 points of Personal hygiene.(5)

Ans:

- Take a bath everyday.
- Keep your nails trimmed and clean.
- Brush your teeth twice a day, and rinse your mouth after every meal.
- Wash your hands with soap before meals, and after visiting the toilet.
- Wear clean clothes. Be particularly very careful about undergarments.
- Do not share articles of personal use, like combs and towels.
- Keep your feet clean and wear clean socks.
- Comb your hair everyday with a clean comb. Wash your hair with soap or shampoo once a week.

6. List out the 5 important uses of Air. (5)

Ans:

- Air is used to regulate the temperature. The air absorbs a lot of the heat of the sun during the day.
- Air plays a major role in the process of hearing. When we speak, the vibrates and the vibrations make our eardrums to vibrate and so we can hear each other.
- Compressed air is used for inflating tyres and it is also used in sprayers.
- Air acts as a source of some gases like nitrogen, which is essential for plants and animals.
- Wind is the horizontal motion of air caused by the pressure difference between two places has various uses such as it can move the clouds, helps in seed dispersal, etc,..

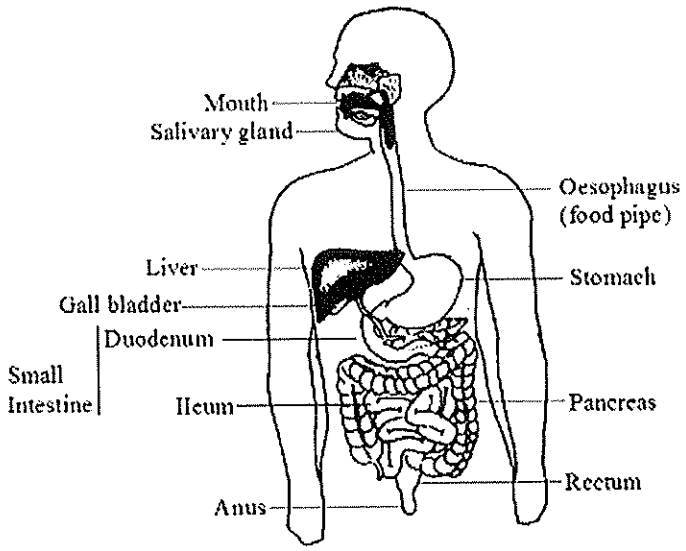
7. Explain the Solar and Lunar Eclipses.($2^{1/2}+2^{1/2}$)

Ans:

Solar Eclipse: It occurs when the sun, the moon and the earth are in a straight line, and the moon lies between the sun and the earth. In solar eclipse, the moon casts its shadow on the earth. As the moon is much smaller than the earth, it casts its shadow only on a limited region on the earth. When this happens, either a part or the whole of the sun is not visible for some time in those regions on the earth.

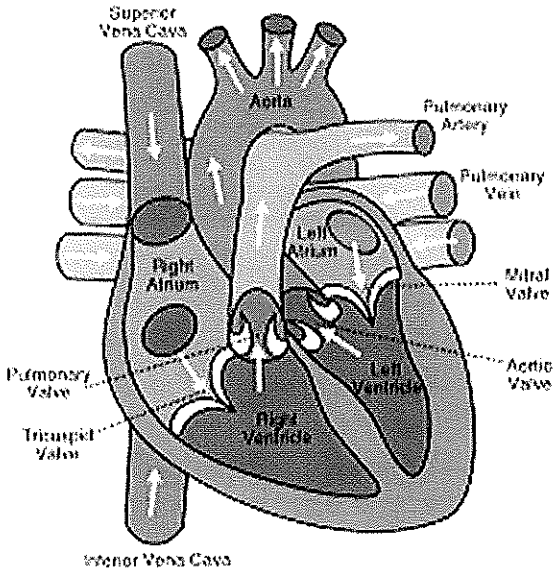
Lunar Eclipse: It occurs when the sun, the Earth and the moon are in a straight line, and the Earth comes in between the sun and the moon. In a lunar eclipse, the Earth's shadow falls on the moon. Thus, a part or whole of the moon is not visible for sometime in some parts on the Earth.

8. (a)Draw and label the parts of the Human Digestive System. (5)



(or)

(b)Draw and label the parts of a Human Heart.(5)



9. Mention the factors on which the nature of the shadow depends. (5)

Ans: The nature of the shadow formed depends on the following factors;

- **Shape of the object- the shadow of a ball is different from that of a stick.**
- **The nature of the source of light.**
- **The size of the object.**
- **The distance between the source of light and the object.**
- **The distance between the source of light and the surface on which the shadow falls.**

10. Explain the process of Respiration in plants.(5)

Ans: Plants also respire. The starch they make breaks down to glucose. During respiration, glucose is broken down to carbon dioxide, water and energy. The energy released is used for the life processes. This is how the process of respiration takes place in plants.

Glucose + oxygen ------> carbon dioxide + water + energy

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