

City International School

ANNUAL EXAMINATION 2015 – 2016

Date : 04/03/2016

Std : IX

Subject : Biology (Paper 3)

Marks : 80

Time : 2 hrs

Answer to this paper must be written on the paper provided separately.

You will not be allowed to write during the first 15 minutes.

This time is to be spent in reading the question paper, the time given at the head of this paper is the time allowed for writing the answer.

Section A is compulsory. Attempt any four questions from section B.

The intended marks for questions or parts of questions are given in brackets ()

SECTION – A [40 MARKS]

Attempt all questions from this section.

- Q. 1 a. Name the following. (5)**
- A neurotransmitter.
 - The blood vessel that start with a capillary and ends in a capillary.
 - The tissue in the skin where the fat is stored.
 - A mineral needed for the functioning of thyroid gland.
 - An enzyme which converts fat into fatty acids.
- b. Define. (5)**
- Nutrition
 - Reflex action
 - Pulse
 - Balanced diet
 - Power of accommodation
- c. State whether the following statements are True or False. Correct and rewrite the false statements by changing the first or last word only (5)**
- Cones enable us to see in day light
 - The element needed for the transmission of nerve impulse is calcium.
 - The expulsion of undigested food from the alimentary canal is called excretion
 - Amylase converts starch into maltose.
 - The blood plasma from which fibrinogen has been removed is known as lymph
- d. Given below are five groups of terms. In each group arrange and rewrite the terms in the correct order so as to be in logical sequence. (5)**
- Duramater , piamater , pericardium , arachnoid
 - Blinking , knitting without looking , smiling , blushing
 - Stomach , oesophagus , liver , small intestine
 - Vitamin K , Vitamin B1 , Vitamin A , Vitamin D
 - Trachea , Bronchus , Alveolus , Diaphragm

e. **Given below are five groups of terms. In each group arrange and rewrite (5) the terms in the correct order so as to be in logical sequence.**

- i. Tympanum , Stapes , Malleus ,Organ of corti ,Incus
- ii. Right auricle , Pulmonary vein , Post and pre vena cava , Lungs , Right ventricle ,Pulmonary artery , Left auricle
- iii. Association neuron , Effector , Motor neuron , Receptor , Sensory neuron
- iv. Lens , Pupil , Conjunctiva , Yellow spot , Cornea
- v. Aorta , Hepatic vein , Hepatic portal vein , Stomach , Liver

f. **Give the exact location of . (5)**

- i. Mitral valve
- ii. Organ of corti
- iii. Epiglottis
- iv. Incus
- v. Yellow spot

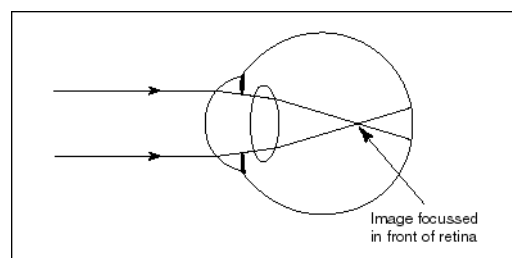
g. **Given below is an example of certain structure and its special functional activity . On a similar pattern fill in the blanks with suitable functions : (5)**

Example : Chloroplast and Photosynthesis

- i. Molar and _____
- ii. Iris and _____
- iii. Gall bladder and _____
- iv. Pleura and _____
- v. Chordae tendena and _____

h. **The diagram given below shows a vertical section of human eye : (5)**

- i. What is the function of part labeled 1 ?
- ii. Name the defect shown in the diagram .
- iii. Give possible reasons for this defect.
- iv. What lens is used to correct this defect ?



SECTION – B [40 MARKS]

Attempt any four questions from this section.

Q. 2 a. i. **Complete the following table: (3)**

Organ	Enzyme	Function
Stomach	1	Converts proteins into _____ 2 _____
Small Intestine	3	Converts maltose into _____ 4 _____
Small Intestine	5	Converts _____ 6 _____ into polypeptides

ii. **State any 4 functions of liver . (2)**

b. Explain the following terms : (5)

- | | | |
|------------------------|----------------|---------------------|
| i. Stereoscopic vision | ii. Leucoderma | iii. Vital capacity |
| iv. Digestion | v. Diapedesis | |

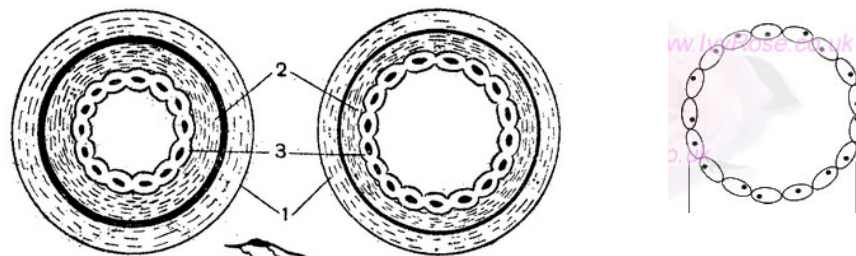
Q. 3 a. Draw a diagram of the human eye as seen in a vertical section and label the Part which suits the following functions / descriptions: (5)

- The layer which prevents reflection of light.
- The structure that alters the focal length of the lens.
- The region of distinct vision.
- The part which transmits the impulse to the brain.
- The outermost transparent layer in front of the eye lens.
- The fluid present in the anterior part of the eye in front of the eye lens.

b. Name the following : (5)

- The unit of protein.
- Structure that carries visual stimuli from retina to brain.
- Protective coverings located around the human brain and spinal cord.
- Eye lens losing flexibility resulting in a kind of long sightedness.
- International organization which supports projects for research on diseases.
- The process of dilation of blood vessels due to high temperature.
- The cavity in the body in which the human lungs are located.
- The junction between two nerve cells.
- The dead protein present in the stratum corneum.
- A disease in which the number of WBCs increase at the cost of RBCs.

Q. 4 a. The figures given are cross- sections of blood vessels : (5)



- Identify the blood vessels A,B and C .
- Name the parts labeled 1- 4.
- Mention the two structural differences between A and B.
- Name the type of blood that flows (a) through A (b) through B.
- In which of the above vessels referred to in (i) above does exchange of gases actually take place ?

b. Differentiate between the following pairs on the basis of what is mentioned Within brackets: (5)

- Iron and retinol (Function)
- RBC and WBC (scientific term)
- Rods and Cones of Retina (Type of pigment)
- Respiration and Breathing (Definition)
- Sympathetic and Parasympathetic Nervous system (Function)

- Q. 5 a.** Given below in the box are a set of 20 biological terms . These can be paired (5)
into 10 matching pairs . Identify and match the pairs :

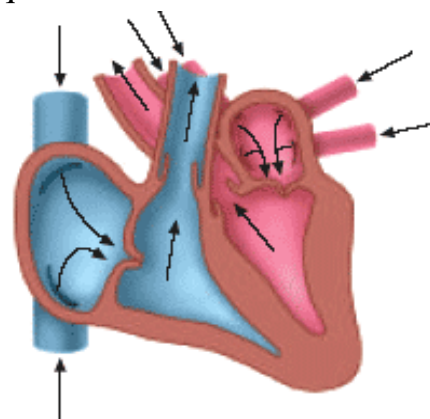
Cartilagenous rings , Complemental air , Large surface area , Bronchi , Voice box , Epiglottis , Extra inhalation , Alveoli , Swallowing , Larynx , Breathing movements , Respiratory pigment , Anaerobic respiration , ATP molecules , Haemoglobin , Alveolus , Currency of energy , Diaphragm , Place where carbon dioxide leaves the blood , Lactic acid .

- b. Give scientific reasons for the following:** (5)

- i. It is difficult to breath at high altitude.
- ii. Vitamins are not digested by enzymes.
- iii. A person after consuming alcohol walks clumsily.
- iv. One feel blinded for a short time while coming out for a dark room.
- v. The walls of ventricles is thicker than auricles.

- Q. 6 a.** The diagram given below represents the human heart in one phase of its (5)
Functional activities. Study the same and answer the questions that follow :

- i. Name the phase .
- ii. Label the parts 1, 2 and 3
- iii. Which part of the heart is contracting in this phase ? Give a reason to support your answer .
- iv. What type of blood flows through the parts marked '4' and '5' ?
- v. Why veins provided with valves?

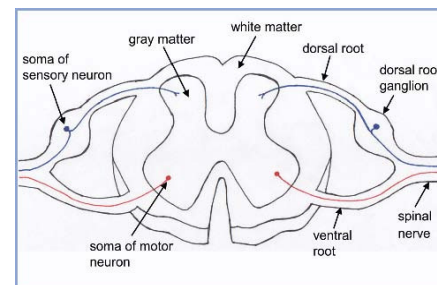


- b. State the role of the following :** (5)

- i. Red Cross ii. Subcutaneous fat layer iii. Aortic semilunar valve
- iv. Eustachian tube v. Alveoli

- Q. 7 a.** The diagram given alongside is a representation of a certain phenomenon (5)
pertaining to the nervous system . Study the diagram and answer the following questions :

- i. Name the phenomenon that is being depicted.
- ii. Name the parts 1,2 , 3 and 4.
- iii. Write the functions of parts 5 and 6.
- iv. How does the arrangement of neurons in the spinal cord differ from that of the brain
- v. State the function of cerebrospinal fluid .



- b. Answer the following questions.** (5)

- i. What is heat stroke ?
- ii. State any two characteristics of an Enzymes .
- iii. Name two muscles that help in respiration.
- iv. Briefly explain the process of blood clotting.