

**St. Thomas' School, Agra**  
**Half Yearly Examination (2024-25)**  
**(Specimen Question Paper)**  
**Class: IX**  
**Subject: Science Paper-3 (Biology)**

**M. Time: 2 Hours**

**M. Marks: 80**

**Name:** \_\_\_\_\_

**Roll No.:** \_\_\_\_\_

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**Section – A (40 Marks)**

Question 1. Choose and write the correct answer:

[15]

i. Ball and socket joint is found at: a. Shoulder

b. Hip

c. (a) and (b)

d. Elbow

ii. Mammary gland is a modified:

a. Sebaceous gland

b. Thyroid gland

c. Sweat gland

d. Ceruminous gland

iii. The blood leaving the tissue becomes richer in:

a. Carbon dioxide

b. Water

c. Haemoglobin

d. Oxygen

iv. Malaria is caused by a:

a. Helminth

b. Bacteria

c. Protozoan

d. Virus

v. Penicillin is:

a. an antivenin

b. an antiseptic

c. an antitoxin

d. an antibiotic

vi. Which of the following is a hinge joint?

a. Knee

b. Shoulder

c. Hip

d. Wrist

vii. Insulin is secreted by:

a. Pituitary gland

- b. Pancreas
- c. Thyroid gland
- d. Adrenal gland

viii. Oxygenated blood is carried by:

- a. Pulmonary artery
- b. Pulmonary vein
- c. Vena cava
- d. Right ventricle

ix. Tuberculosis is caused by:

- a. Virus
- b. Bacteria
- c. Fungi
- d. Protozoa

x. Which of the following is used to treat bacterial infections?

- a. Vaccine
- b. Antibiotic
- c. Antiviral
- d. Antifungal

xi. Which of these glands is known as the "master gland"?

- a. Thyroid gland
- b. Pituitary gland
- c. Adrenal gland
- d. Pancreas

xii. Which vitamin is produced in the skin when exposed to sunlight?

- a. Vitamin A
- b. Vitamin B
- c. Vitamin C
- d. Vitamin D

xiii. Which of the following diseases is NOT transmitted by mosquitoes?

- a. Dengue
- b. Malaria
- c. Cholera
- d. Zika

xiv. The normal pH of human blood is:

- a. 6.4
- b. 7.0
- c. 7.4
- d. 8.0

xv. Which of the following is a primary consumer in a food chain?

- a. Lion
- b. Deer
- c. Grass
- d. Eagle

Question 2.

i. Complete the following statements: [5]

- a) The primary muscle involved in the process of breathing is the \_\_\_\_\_.
- b) The tiny air sacs in the lungs where gas exchange occurs are called \_\_\_\_\_.
- c) The blood vessel that carries oxygenated blood from the lungs to the heart is called the \_\_\_\_\_.
- d) The main artery that carries oxygenated blood from the heart to the rest of the body is the \_\_\_\_\_.
- e) The process by which oxygen is taken into the body and carbon dioxide is expelled is known as \_\_\_\_\_.

ii. Correct the following false statements: [5]

- a) The diaphragm relaxes during inhalation, causing air to enter the lungs.
- b) The pulmonary artery carries oxygenated blood from the lungs to the heart. The aorta is a vein that carries deoxygenated blood back to the heart.
- c) Hemoglobin is a protein in white blood cells that binds to carbon dioxide.
- d) During exhalation, the diaphragm contracts and the rib cage moves up.
- e) The tricuspid valve prevents backflow of blood from the left ventricle into the left atrium.

(iii) Find the odd one out along with a reason. [5]

- a) Rib cage, Diaphragm, Heart valves, Intercostal muscles
- b) Plasma, Platelets, Hemoglobin, Hormones
- c) Oxygen, Carbon dioxide, Nitrogen, Hemoglobin
- d) Diaphragm, Trachea, Bronchi, Esophagus
- e) Lungs, Heart, Kidneys, Alveoli

iv. Match the following [5]

- |   |              |
|---|--------------|
| i. Complete absence of pigmentation in the skin | a. Drainage  |
| ii. Nails, hair, horns, hooves etc.             | b. Pandemic  |
| iii. COVID-19                                   | c. Albinism  |
| iv. Malaria                                     | d. Keratin   |
| v. Effluents                                    | e. Anopheles |

v.State the location of the following structures [5]

- a. Villi
- b. Bronchiole
- c. Nucleolus
- d. Headquarters of WHO
- e. Malpighian Layer

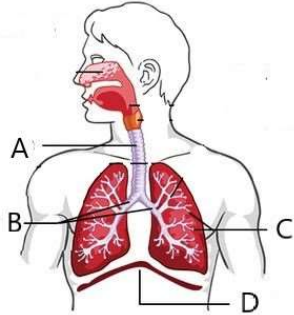
**SECTION B (40 Marks)**  
**(Attempt all the questions.)**

Question3

1. Write the functions of the following in the digestive process: [10]

- (a) Bile
  - (b) Bicarbonates
2. Give two examples each of.
- (a) Ball and socket joint
  - (b) Hinge joint
  - (c) Gliding joint

3. Study the diagram given below and answer the following questions:

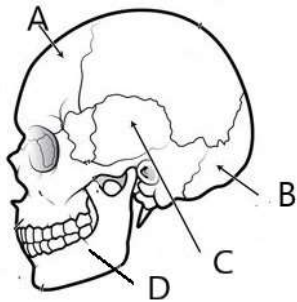


- a. Label the parts A, B, C and D.
  - b. State the main function of label D.
4. What is the significance of emulsification of fats?

Question 4

1. Study the diagram given below and answer the following questions:

[10]

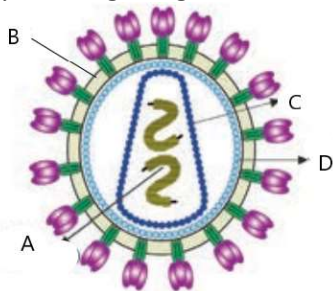


- (a) Label the parts A, B, C and D.
  - (b) State the role played by label D.
2. Write a short note on:
- (a) TB
  - (b) AIDS
3. What is domestic waste? Give examples.
4. Differentiate between the following:
- (a) Breathing and Respiration
  - (b) Respiration in animals and plants
  - (c) External and Internal respiration

Question 5

1. Study the diagram given below and answer the following questions:

[10]



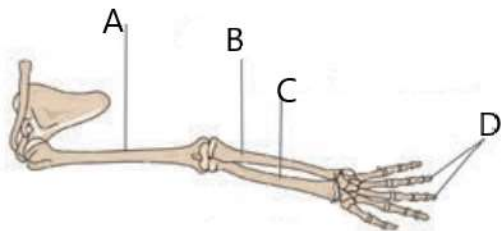
- a. Label the parts A, B, C and D.
  - b. State the disease caused by the object shown above.
2. Write a short note on:
- (a) Waste from mining operation
  - (b) E-waste
3. List two activities of the Red Cross Society.

4. Describe any two uses of Antibiotics.

Question 6

1. Study the diagram given below and answer the following questions:

[10]



- a. Label the parts A, B, C and D.
  - b. State any two joints shown in the diagram above.
2. State any three important functions of the skin.
  3. Differentiate between:
    - a. Communicable and non-communicable diseases
    - b. Congenital and Acquired diseases
  4. Define the following terms:
    - a. Pasteurization
    - b. Epidemic