

Std: IX C

Date: 05/03/2026

Time: 2 Hours

Marks: 80

- Answers to this Paper must be written on the paper provided separately.
- You will not be allowed to write during first 10 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 answers.
- Section A is compulsory. Attempt any four questions from Section B.

**SECTION A**

**(Attempt all questions from this Section.)**

**Q.1 Choose the correct answers to the questions from the given options:(15)**

**(Write the correct option and the corresponding answer)**

i) When is the Red cross day celebrated?

- a) April 8                      b) May 8                      c) March 8                      d) December 8

ii) A farmer living near an informal e-waste recycling area notices crop contamination. Which process most likely caused this problem?

- a) Storage of electronic goods                      b) Repair of old gadgets  
c) Burning of printed wiring boards                      d) Selling reusable components

iii) Assertion (A): Agricultural residues are often not considered waste.

Reason (R): They are commonly reused as animal feed or manure.

- a) Both A and R are true and R is the correct explanation of A  
b) Both A and R are true but R is not the correct explanation of A  
c) A is true but R is false  
d) A is false but R is true

iv) A person sneezes continuously in a dusty environment. Which defence mechanism is primarily helping the body here?

- a) Antibody production                      b) Mechanical barrier  
c) Throwing out of germs                      d) Passive immunity

v) Which pair is correctly matched?

- a) Antiseptic – Phenol                      b) Disinfectant – Iodine  
c) Vaccine – Antibiotic                      d) Antibiotic – Penicillin

vi) During expiration, in humans the diaphragm and external intercostal muscles:

- a) both contract                      b) both relax  
c) contract and relax respectively                      d) relax and contract respectively

vii) Assertion (A): Hypoxia refers to a condition where tissues receives inadequate oxygen supply.

Reason(R): Hypoxia can be caused by high altitude.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

viii) A patient has a lung condition affecting the bronchioles. Which process is most likely to be affected?

- a) Gas exchange in alveoli
- b) Air conduction to alveoli
- c) Mucus secretion in trachea
- d) Pulmonary blood circulation

ix) In the experiment to prove that carbon dioxide is produced during respiration in germinating seeds, lime water is used. What observation confirms the presence of CO<sub>2</sub>?

- a) Lime water turns blue
- b) Lime water remains clear
- c) Lime water turns milky
- d) Lime water evaporates

x) Which of the following is the main substrate for any kind of Respiration?

- a) Glucose
- b) Oxygen
- c) Water
- d) Starch

xi) Which of the following substances is absent in blood serum but present in blood plasma?

- a) Albumin
- b) Fibrinogen
- c) Glucose
- d) Sodium ions

xii) In which of the following steps, mushroom seed consisting of mycelium is introduced in the compost?

- a) Composting
- b) Harvesting
- c) Cropping
- d) Spawning

xiii) The visible, hard part of the nail is called as \_\_\_\_\_.

- a) Nail Bed
- b) Nail root
- c) Nail Plate
- d) Nail Matrix

xiv) Birds and Mammals are considered homeothermal because they:

- a) Lack sweat glands
- b) Show seasonal changes only
- c) Can regulate body temperature internally
- d) Depend on sunlight for warmth

xv) Wrinkling or puckering of skin in water helps in:

- a) Increasing heat loss
- b) Increasing sweating
- c) Preventing infection
- d) Improving grip in wet condition

**Question 2**

**A) Name the following:**

(5)

- i) First step of cellular respiration occurring in cytoplasm.
- ii) The source organism in which antibiotic streptomycin was discovered.
- iii) The scientific name of white button mushroom.
- iv) The process by which WBC's get squeezed out of the walls of the blood capillaries.
- v) The process of disposal of waste by burning.

**B) The Human skin is made up of different layers. Complete the following paragraph with respect to structure of human skin.**

(5)

The Outermost thinner part of the skin is called as i) \_\_\_\_\_. It has three regions/sub-layers. The outermost region contains several layers of flattened dead cells. These cells are made up of fibrous structural protein called ii) \_\_\_\_\_. The innermost region is called as iii) \_\_\_\_\_. Its cells can actively divide and produce new cells. This region contains pigment iv) \_\_\_\_\_, which decides complexion of the skin. Complete loss of pigmentation of the skin all over the body is called as v) \_\_\_\_\_.

**C) State whether true or false, if false correct the underlined word, and Rewrite the statement:**

(5)

- i) One of the end products of anaerobic respiration in animals is Ethanol.
- ii) In Aerobic respiration more energy is liberated than in Anaerobic respiration.
- iii) The comma shaped bacteria are called as Cocci.
- iv) Our body can make limited variety of different antibodies.
- v) The waste given out from our home is called as Domestic waste.

**D) Given below is a diagram of a human respiratory system. Match the labelled structures with their correct function. (E.g. F- 6. Contributes to the enlargement of chest cavity)**

(5)

	1. It is a Common passage for food pipe and wind pipe
	2. Its mucous secretions entraps harmful particle
	3. It contains vocal cords for producing sound
	4. It carries inhaled air to the lungs.
	5. It facilitates exchange of oxygen and carbon-dioxide

**E) Write the full forms of the following abbreviations.**

(5)

- i) ATP    ii) DNA    iii) DPT    iv) BCG    v) WHO

## SECTION B

(Attempt any 4 questions from this Section.)

### Question 3:

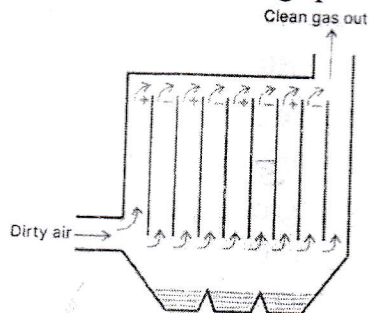
i) What is a toxoid?

(10)

(1)

ii) The figure given below represents a device used for treating polluted air. Study the same and answer the following questions:

(2)



a) How does this device work?

b) Name another similar kind of device which can also be used for the same purpose.

iii) a) Where is the principal heat-regulating centre located in the brain?

(2)

b) Explain: Vasoconstriction.

iv) What is casing in mushroom cultivation? Why is this step important?

(2)

v) a) Who discovered Penicillin?

(3)

b) How does penicillin kill bacteria?

c) Write one example of sulpha drug.

### Question 4:

i) Respiration includes breathing but breathing doesn't include respiration. Explain the statement.

(10)

(1)

ii) A child recovers from measles and never suffers from it again.

(2)

a) Name the type of immunity developed.

b) Why is this immunity long-lasting?

iii) Define: Mine tailing. How mine tailing can be used?

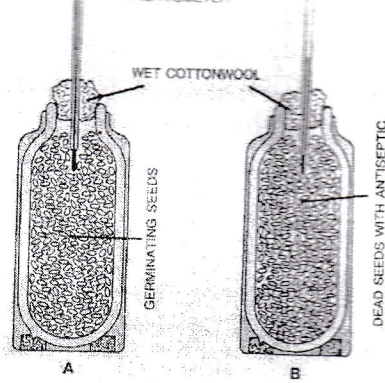
(2)

iv) Protection is the primary function of the skin. Explain the statement. (2 points)

(2)

v) Study the following experiment and answer the following questions:

(3)



- a) Why is the thermometer kept in set up A shows higher reading?
- b) Which antiseptic can be used in this experiment?
- c) Why dead bean seeds are treated with antiseptic?

**Question 5:**

- i) How does trachea remains distended permanently? (10) (1)
- ii) What is cerumen? What is its function? (2)
- iii) Differentiate between Active and Passive immunity. (2 points) (2)
- iv) The industrial and municipal waste waters are treated in *Effluent Treatment plant* before disposing them off into water bodies. Explain its secondary treatment. (2)
- v) Draw a neat labelled diagram of the Bacterial cell. (Label any 4 parts) (3)

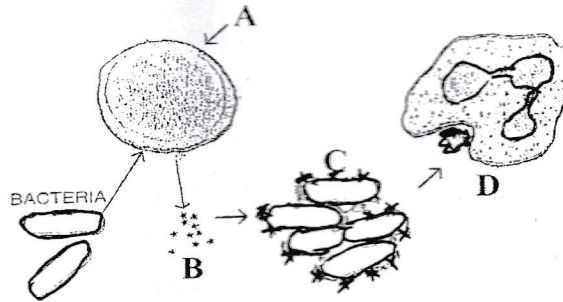
**Question 6:**

- i) Differentiate between Acne and Pimples. (10) (1)
- ii) a) Why is left lung slightly smaller than the right lung? (2)
- b) Name the membranous covering of the lungs.
- iii) a) Which bacteria is used for genetic engineering to produce Insulin? (2)
- b) What is denitrification? Name the denitrifying bacteria.
- iv) Draw a neat and labelled diagram showing the experimental set up (Initial and Final stages) to demonstrate anaerobic respiration in germinating seeds. (Label any 4 part) (2)
- v) Write any three functions of WHO. (3)

**Question 7:**

- i) What is Pasteurization? (10) (1)
- ii) How Spore formation help bacteria to escape unfavourable conditions? (2)

iii) The figure given below represent Antibodies attacking bacteria. Label A and D. (2)



iv) Write the balanced chemical equation of aerobic respiration? Name any two inlets of oxygen for respiration in plants. (2)

v) Explain the sequence of blood flow in pulmonary circulation from right ventricle to left auricle, naming the major blood vessels involved. (3)

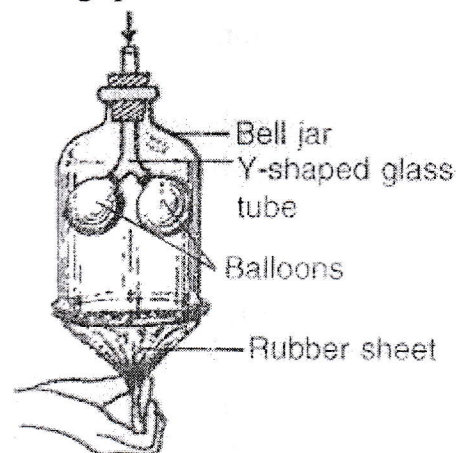
**Question 8:** (10)

i) Why is it usually difficult to demonstrate respiration in green plants? (1)

ii) a) Define: Fermentation. (2)

b) What is leavening in bread making?

iii) The figure given below shows an experimental set up to demonstrate a process. Answer the following questions. (2)

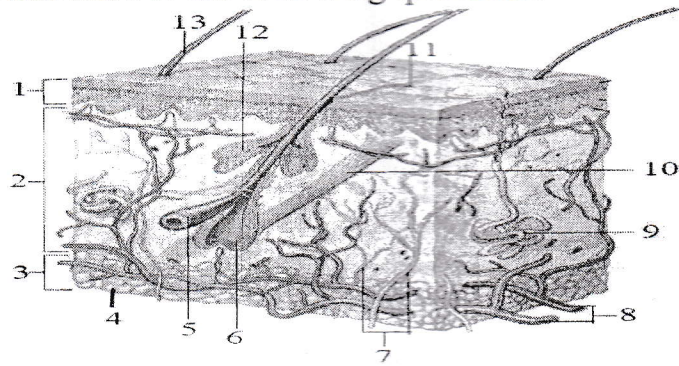


What do the following parts in the diagram represent?

a) Balloons    b) Rubber sheet    c) Y-shaped tube    d) Bell jar

iv) Write any two uses of antibiotics. (2)

v) Given below is a diagram of a microscopic structure of human skin. Study the diagram and answer the following questions. (3)



- What is the function of 10?
  - Write the label and the biology name of the part which acts as a heat-insulating layer and shock absorber.
  - In which layer sensory receptors are present? Write its label and Name.
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