

**KOTHARI INTERNATIONAL SCHOOL, NOIDA**  
**HALF YEARLY EXAMINATION, SESSION: 2025-26**  
**GRADE: 7 SUBJECT: SCIENCE**  
**SET A SECTION B (SUBJECTIVE)**

DAY & DATE: TUESDAY – SEPTEMBER 16, 2025

MAXIMUM MARKS: 60

TIME ALLOTTED: 2 HOURS 30 MINUTES

NAME: \_\_\_\_\_

ROLL NO: \_\_\_\_\_

**GENERAL INSTRUCTIONS:**

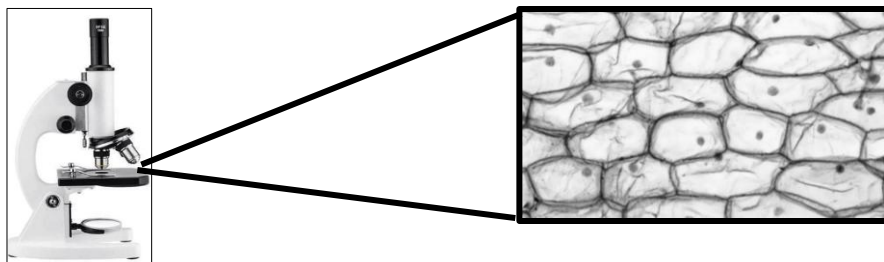
1. *This question paper consists of 4 pages and contains 19 questions.*
2. *Read the question paper carefully*
3. *All questions are compulsory to attempt.*
4. *No question to be attempted on the question paper.*

**Q1.** Ramjas lived in an old house. His father brought home a new house plan design for reconstruction. While everyone was observing, Ramjas noticed that the house lacked ventilators and expressed his concern. (2)

- a) **Are ventilators important in a house? Give one reason to support your answer.**
- b) **Which colour would you choose to paint the outer walls of your house in summer? State the reason for your choice.**

**Q2.** Emma, a science enthusiast saw an onion peel with the help of device 'M'. But before putting it under the slide. She added a liquid 'N' and a dye name 'O'.

**Name the device 'M', liquid 'N' and dye 'O'. Mention the role of the dye.** (2)



**Device M**

**Q3. Case Study:**

A group of students performed an activity showing how saliva helps in digesting starch. They chewed a piece of bread and observed how it turned sweet in the mouth. Their teacher explained that the enzyme in saliva breaks down starch into sugar, which shows the importance of digestion beginning in the mouth.

**In an activity, students chewed a piece of bread and noticed it tasted sweet after some time. Why did this change in taste occur? Explain briefly.** (2)

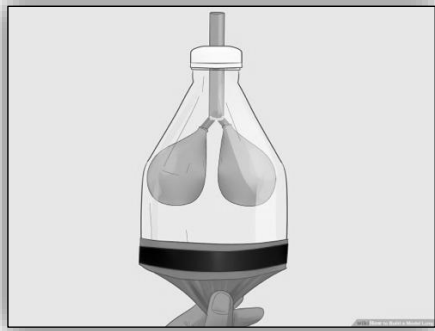
**Q4.** Rohan observes the following while doing an experiment.

(2)

Litmus Paper	P	Q	R	S
Blue	Red	Deep Red	No change	Mauve
Red	No change	No change	Blue	Mauve

- Which of these is strongly acidic or basic?
- Which two solutions will react to show neutralization reaction?

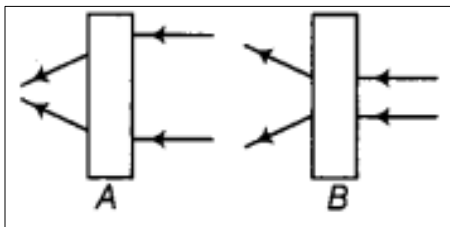
**Q5.** The figure given below shows a model of lungs using a pair of balloons and an elastic membrane-tied to a bottle whose wide end has been removed. When the elastic membrane is pulled, the balloons expand.



On the basis of above statement answer the following questions.

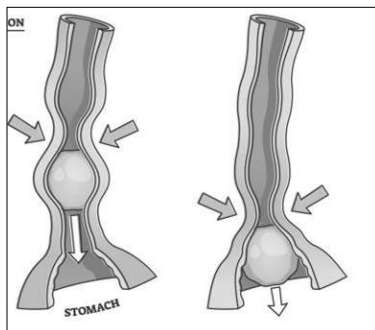
- The elastic membrane represents which part of the respiratory system? (1)
- Why balloons are expanding when the thin elastic membrane is pulled downwards? (1)

**Q6.**



The given figures show the path of light through lenses of two different types represented by rectangular boxes A and B. What is the nature of lenses A and B? (2)

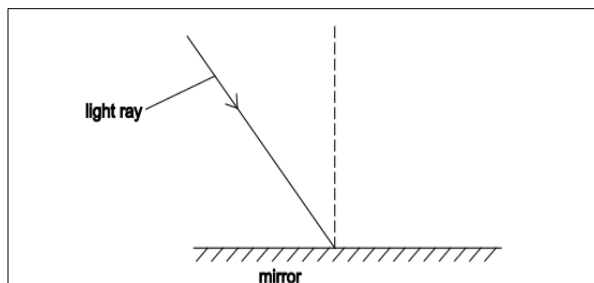
**Q7.**



- Identify the process shown in the given figure of the food pipe. Also, state its function in digestion. (2)
- If the shown movement stops in the food pipe, what immediate problem will a person face? (1)

**Q8.** Write an experiment to show that sunlight is necessary for photosynthesis. (3)

**Q9.**



Shaurya investigates what happens when light hits a mirror and a glass block. Complete the diagram to show what happens to a light ray that hits the surface of a mirror. (3)



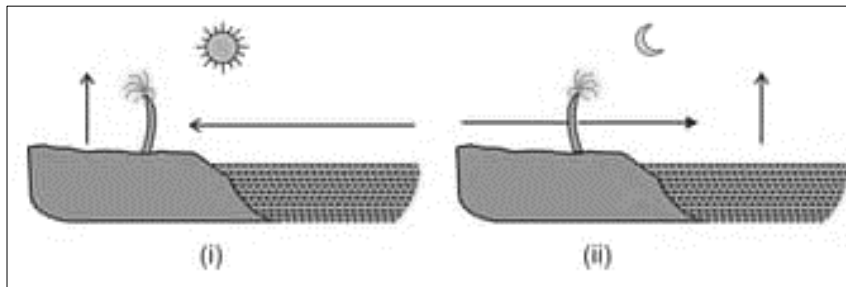
- Q15.** a) Why should factory wastes be neutralised before discharging them into water bodies? (2)
- b) Ravi noticed that the marble statue in his city park has become dull and rough after several years due to acid rain. **Explain how acid rain damages marble and suggest one way to reduce this effect.** (3)

**Q16.** When sunlight passes through a glass prism, it splits into a band of seven colours. If all these colours are again passed through a second identical prism kept in an inverted position, the colours recombine to form white light.

**Why does the first prism split the light into different colours while the second prism recombines them into white light?** (2)

b) How can you distinguish between a plane mirror, a concave mirror and a convex mirror without touching them? (3)

**Q17.**



- a) **Observe the given pictures carefully and answer the question that follows:**
- i) In which situation does **sea breeze** occur – day or night? (2)
- ii) Which type of breeze is useful for cooling during summer afternoons?

b) **Convert 77 °F into degree Celsius.** (2)

**Q18.** a) Describe briefly, how digestion and absorption take place in *Amoeba*. (2)

b) Sehaj took some grains of boiled rice in test tube 'A' and Ramesh took boiled and chewed rice in test tube 'B'. Both of them poured 1-2 drops of iodine solution into the test tubes and observed the colour change. What colour would they have observed? Give reason for your answer. (2)

**Q19.** a) How do Rhizobium bacteria and leguminous plants help each other in survival? (2)

b) Wheat dough if left in the open, after a few days, starts to emit a foul smell and becomes unfit for use. Give reason. (2)