

FREE PRACTICE PACK · EDITION 1

Class 7 Science Olympiad practice

16 original questions + explained answers

For students preparing for SOF ISO.

Inside this pack

Eight topic-practice questions and an eight-question, 20-minute mini-mock.

Topics selected for practice

- Life processes and health
- Matter and chemical changes
- Heat, light and electricity
- Motion and Earth science

How to use it

Try the practice first. Complete the mini-mock in one sitting. Check the explanations, mark mistakes, and retry them the next day.

This pack covers selected topics. It is original BodhiScore material, independent of SOF, and is not an official paper or a full-length exam. Check the official syllabus for the complete scope.

Topic practice

Work through these eight questions without a timer. Explain your choice before checking the solutions.

1. Life processes and health

A green plant kept in darkness cannot make enough food. Which process is limited?

- A.** Pollination
 - B.** Photosynthesis
 - C.** Digestion
 - D.** Germination only
-

2. Matter and chemical changes

Which observation is strongest evidence that a new substance formed?

- A.** Ice changes shape
 - B.** Sugar dissolves in water
 - C.** Paper is folded
 - D.** A gas forms when two materials react
-

3. Heat, light and electricity

Why is copper used for electrical wires?

- A.** It is a perfect insulator
 - B.** It produces current by itself
 - C.** It blocks every magnetic field
 - D.** It conducts electricity well
-

Topic practice (continued)

4. Motion and Earth science

A bicycle travels 150 m in 10 s. What is its average speed?

- | | |
|--------------------|------------------|
| A. 1500 m/s | B. 10 m/s |
| C. 15 m/s | D. 25 m/s |
-

5. Life processes and health

Food moves from the stomach into the small intestine, where most nutrients are absorbed. What helps absorption?

- | | |
|---|--------------------------------------|
| A. The heart storing food | B. A large inner surface area |
| C. The lungs pumping air into food | D. Bones dissolving nutrients |
-

6. Matter and chemical changes

Iron left damp develops reddish rust. Which condition is needed for rusting?

- | | |
|----------------------------|------------------------------|
| A. Oxygen and water | B. Only darkness |
| C. Only sound | D. Pure nitrogen only |
-

Topic practice (continued)

7. Heat, light and electricity

A ray strikes a plane mirror at 35 degrees to the normal. What is its angle of reflection?

- A.** 70 degrees
 - B.** 145 degrees
 - C.** 35 degrees
 - D.** 55 degrees
-

8. Motion and Earth science

A rock dropped from rest accelerates downward. Which force causes its falling motion?

- A.** Friction alone
 - B.** Magnetism
 - C.** Upthrust alone
 - D.** Gravity
-

Timed mini-mock

Set a 20-minute timer for these eight questions. Score 1 point per correct answer; there is no penalty for an incorrect answer. This is BodhiScore's practice scoring.

9. Life processes and health

Why does breathing rate rise during a sprint?

- A.** Muscles need more oxygen and release more carbon dioxide
 - B.** The body stops using energy
 - C.** The lungs make food
 - D.** Bones need extra water
-

10. Matter and chemical changes

A solution turns blue litmus red. What type of solution is it likely to be?

- | | |
|--------------------|------------------------|
| A. Basic | B. Neutral only |
| C. Metallic | D. Acidic |
-

11. Heat, light and electricity

Two identical bulbs are connected in series to a battery. If one bulb is removed, what happens to the other?

- | | |
|---|-----------------------------|
| A. It goes out because the circuit opens | B. It glows brighter |
| C. It becomes a battery | D. Nothing changes |
-

Timed mini-mock (continued)

12. Motion and Earth science

A lunar eclipse occurs when which object is between the Sun and Moon?

- | | |
|------------------|-------------------|
| A. A star | B. Earth |
| C. Mars | D. A cloud |
-

13. Life processes and health

A plant's roots absorb water, which then reaches leaves. Which tissue mainly carries water upward?

- | | |
|------------------|-----------------|
| A. Muscle | B. Xylem |
| C. Phloem | D. Nerve |
-

14. Matter and chemical changes

Vinegar is added to baking soda and bubbles appear. What is the likely gas?

- | | |
|--------------------------|-----------------------|
| A. Hydrogen only | B. Nitrogen |
| C. Carbon dioxide | D. Oxygen only |
-

Timed mini-mock (continued)

15. Heat, light and electricity

A metal pan and wooden spoon are left in the same warm room. Why can the metal feel cooler to touch?

- | | |
|---|--|
| A. It conducts heat away from your hand faster | B. It is at a lower temperature by definition |
| C. Wood is colder than ice | D. Touch creates electricity |
-

16. Motion and Earth science

A 2 kg cart accelerates at 3 m/s^2 . What net force acts on it?

- | | |
|-----------------|---------------|
| A. 1.5 N | B. 5 N |
| C. 6 N | D. 9 N |
-

Answers and explanations

Check why the answer works, then retry any question you missed.

1. B - Photosynthesis

Photosynthesis needs light to make food in green leaves.

2. D - A gas forms when two materials react

Gas formation during a reaction can indicate a new substance has formed.

3. D - It conducts electricity well

Copper's high electrical conductivity allows current to flow easily.

4. C - 15 m/s

Average speed = distance/time = $150/10 = 15$ m/s.

5. B - A large inner surface area

The small intestine's folded surface gives a large area for nutrient absorption.

6. A - Oxygen and water

Rusting generally requires both oxygen and moisture.

7. C - 35 degrees

The law of reflection says angle of reflection equals angle of incidence.

8. D - Gravity

Earth's gravitational force pulls the rock downward.

9. A - Muscles need more oxygen and release more carbon dioxide

Active muscles respire faster and exchange more gases.

Answers and explanations (continued)

10. D - Acidic

Acids turn blue litmus paper red.

11. A - It goes out because the circuit opens

Removing one bulb breaks the single series path, so current stops.

12. B - Earth

Earth blocks sunlight from reaching the Moon during a lunar eclipse.

13. B - Xylem

Xylem transports water and minerals from roots toward the rest of a plant.

14. C - Carbon dioxide

This acid-carbonate reaction releases carbon dioxide gas.

15. A - It conducts heat away from your hand faster

Metal transfers heat from skin faster, creating a cooler sensation.

16. C - 6 N

Newton's second law gives $F = ma = 2 \times 3 = 6 \text{ N}$.

Topic scope checked against SOF syllabus: [SOF ISO Class 7 syllabus](#)