

Full Practice Exam — Set 2

Science · Class 4 · Full Syllabus Practice Exam

TIME 60 minutes	QUESTIONS 35	TOTAL MARKS 40	MAX. SCORE ___ / 40
--------------------	-----------------	-------------------	------------------------

Name: _____ Class/Sec: _____ Date: _____

INSTRUCTIONS

- There are **35 questions** in this paper. All questions are compulsory.
- Each question has four options (A), (B), (C) and (D). Exactly **one** option is correct.
- Questions 1–30 carry **1 mark** each. Questions 31–35 (Achievers Section) carry **2 marks** each.
- There is no negative marking. Use of a calculator is **not** allowed.
- Study every diagram carefully. Rough work may be done at the side of each page.

Section 1 — Logical Reasoning

Q1–Q10 · 1 mark each

- What comes next in the number pattern? 3, 7, 11, 15, ____
 (A) 18 (B) 19
 (C) 20 (D) 21
- Find the **odd one out**: 9, 16, 25, 30
 (A) 9 (B) 16
 (C) 25 (D) 30
- What comes next in the letter series? B, D, F, H, ____
 (A) J (B) I
 (C) K (D) L
- In a certain code, CAT is written as 3-1-20. How is DOG written in the same code?
 (A) 4-14-7 (B) 3-15-7
 (C) 4-15-8 (D) 4-15-7
- Fish : Scales :: Bird : ____
 (A) Feathers (B) Fur
 (C) Shell (D) Scales

6. How many **triangles** of any size are there in the figure below?

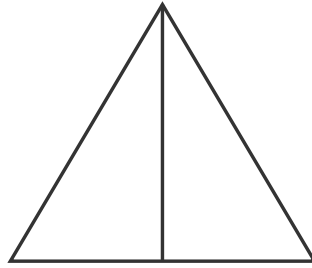


Fig. 6.1

- (A) 2 (B) 3
(C) 4 (D) 5
7. In a queue, Farah is 6th from the front and 8th from the back. How many people are there in the queue?
(A) 14 (B) 12
(C) 13 (D) 15
8. Kabir is facing south. He turns 90° clockwise, and then turns 90° clockwise again. Which direction is he facing now?
(A) South (B) North
(C) East (D) West
9. In a certain code, every letter of a word is moved two places forward in the alphabet (A becomes C, B becomes D, and so on). Using this rule, DOLL is coded as FQNN. Using the same rule, how is FISH coded?
(A) GKUJ (B) HKUI
(C) HJUJ (D) HKUJ
10. Four friends — Naina, Omar, Priya and Qadir — are compared by height. Omar is taller than Naina but shorter than Priya. Qadir is the tallest of all four. Who is the second tallest?
(A) Priya (B) Omar
(C) Naina (D) Qadir

Section 2 — Science

Q11–Q30 · 1 mark each

11. Which part of a plant absorbs water and minerals from the soil?
(A) Leaf (B) Root
(C) Flower (D) Stem
12. The seed of a coconut has a thick, fibrous, waterproof husk. This helps it to be dispersed mainly by _____.
(A) Wind (B) Animals
(C) Water (D) Bursting of the fruit
13. Which of these animals is a **reptile**?
(A) Toad (B) Salamander
(C) Newt (D) Turtle
14. In the life cycle of a frog, the young stage that lives only in water and breathes through gills is called the _____.
(A) Tadpole (B) Nymph
(C) Pupa (D) Larva

15. Camels have broad, flat feet. This adaptation mainly helps them to _____.
 (A) Swim in water (B) Walk easily on soft sand without sinking
 (C) Dig burrows in soil (D) Climb trees
16. Study the water cycle diagram below. Which process happens at the stage marked X, where water vapour changes back into tiny droplets that form clouds?



Fig. 16.1 — Stages of the water cycle

- (A) Evaporation (B) Precipitation
 (C) Condensation (D) Collection
17. Which is the **longest** bone in the human body?
 (A) Radius (B) Humerus
 (C) Tibia (D) Femur
18. Which teeth are mainly used for **grinding** food?
 (A) Incisors (B) Canines
 (C) Molars (D) None of these
19. In the human digestive system, digestion of food begins in the _____.
 (A) Mouth (B) Small intestine
 (C) Food pipe (D) Stomach
20. A person whose diet lacks vitamin C for a long time is most likely to suffer from _____.
 (A) Night blindness (B) Bleeding gums (scurvy)
 (C) Rickets (D) Goitre
21. Which of these foods mainly gives us **energy** to work and play?
 (A) Fish (B) Pulses
 (C) Rice (D) Eggs
22. A small piece of paper is rubbed with a food item and, once dry, it stays translucent (see-through) with an oily patch. This shows that the food contains _____.
 (A) Starch (B) Vitamin C
 (C) Protein (D) Fat
23. Which state of matter has **no fixed shape and no fixed volume**?
 (A) Gas (B) Liquid
 (C) Both solid and liquid (D) Solid
24. A ripe mango falls straight down from a tree instead of drifting off sideways. This happens mainly because of _____.
 (A) Friction (B) Gravity
 (C) Magnetism (D) Air pressure
25. Cooking pot handles are usually made of plastic or wood because these materials are good _____.
 (A) Conductors of heat (B) Conductors of electricity
 (C) Insulators of heat (D) Magnets

26. A sloping plank is used to roll a heavy drum up into a truck instead of lifting it straight up. This sloping plank is an example of a simple machine called a/an _____.
 (A) Lever (B) Pulley
 (C) Wheel and axle (D) Inclined plane
27. An empty plastic bottle with its cap tightly closed is hard to squash flat. This shows that _____.
 (A) Air takes up space inside the bottle (B) The bottle is too strong to squeeze
 (C) There is no air inside the bottle (D) Plastic cannot be squeezed at all
28. The figure shows an identical pole placed at two different distances from a lamp, together with the shadow it casts on the wall behind it. Based on the lengths of the shadows shown, which shadow was cast by the pole standing closer to the lamp?

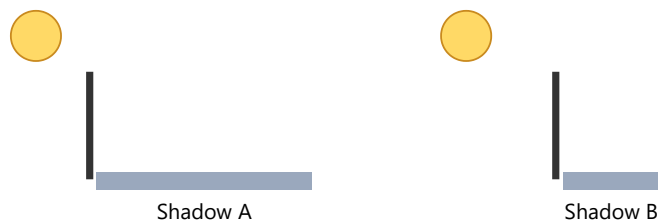


Fig. 28.1 — Same pole at two distances from a lamp

- (A) Shadow B (B) Shadow A
 (C) Both are equal (D) Cannot be determined
29. Light travels in a _____ line, which is why a shadow always has sharp edges and matches the outline of the object blocking the light.
 (A) Curved (B) Zigzag
 (C) Straight (D) Circular
30. Large numbers of vehicles running on petrol and diesel release carbon dioxide and other gases into the air. Over many years, the build-up of such gases traps extra heat near the earth's surface and slowly raises its average temperature. This effect is known as _____.
 (A) The water cycle (B) Photosynthesis
 (C) The rock cycle (D) The greenhouse effect

Achievers Section

Q31–Q35 · 2 marks each

31. Consider the following statements about the human body.
 (i) The heart pumps blood all through the body.
 (ii) All the food we eat is fully digested inside the stomach itself.
 (iii) As a person grows from childhood to adulthood, many of their bones become harder and some join together.
 Which of the statements is/are correct?
 (A) (i) and (ii) only (B) (ii) and (iii) only
 (C) (i) and (iii) only (D) All three

32. Assertion (A): Earthworms are often called a farmer's friend.

Reason (R): Earthworms loosen the soil as they move through it and mix decayed plant matter into it, making the soil more fertile.

(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.

33. Arrange the following stages of the water cycle in the correct order, starting from water in oceans and rivers: (1) Condensation of water vapour into clouds (2) Evaporation of water due to the sun's heat (3) Precipitation as rain or snow (4) Collection of water in rivers, lakes and oceans

(A) (2), (1), (3), (4)

(B) (2), (3), (1), (4)

(C) (4), (2), (1), (3)

(D) (1), (2), (3), (4)

34. Three identical bean seeds were placed in damp cotton wool in three separate jars. Jar P was kept at room temperature. Jar Q was kept inside a refrigerator at a much lower temperature, also on damp cotton wool. Jar R was kept at room temperature but its cotton wool was left completely dry. After ten days, only the seed in Jar P had sprouted. What does comparing Jar P with Jar R, and then Jar P with Jar Q, show is needed for a seed to germinate?

(A) Sunlight, then water

(B) Water, then suitable warmth

(C) Warmth, then sunlight

(D) Air, then water

35. Match each animal in Column I with its adaptation in Column II.

Column I	Column II
(P) Duck	(1) Webbed feet that help it swim
(Q) Fish	(2) Moist skin that helps it breathe underground
(R) Earthworm	(3) Large eyes that help it see well at night
(S) Owl	(4) Gills and a streamlined body that help it swim

Table 35.1

(A) P-4, Q-1, R-3, S-2

(B) P-3, Q-4, R-1, S-2

(C) P-1, Q-4, R-2, S-3

(D) P-1, Q-2, R-4, S-3

Answer Key

1	B	2	D	3	A	4	D	5	A
6	B	7	C	8	B	9	D	10	A
11	B	12	C	13	D	14	A	15	B
16	C	17	D	18	C	19	A	20	B
21	C	22	D	23	A	24	B	25	C
26	D	27	A	28	B	29	C	30	D
31	C	32	A	33	A	34	B	35	C

Solutions

1. Answer: (B) 19

Each number is 4 more than the one before it: 3, 7, 11, 15. Adding 4 once more to 15 gives **19**.

2. Answer: (D) 30

$9 = 3 \times 3$, $16 = 4 \times 4$ and $25 = 5 \times 5$ — each is a whole number multiplied by itself. **30** cannot be written this way, so it is the odd one out.

3. Answer: (A) J

The letters move forward by two places each time: B, (skip C), D, (skip E), F, (skip G), H, (skip I), **J**.

4. Answer: (D) 4-15-7

Each letter is replaced by its position in the alphabet: C = 3, A = 1, T = 20.

So D = 4, O = 15 and G = 7, giving **4-15-7**.

5. Answer: (A) Feathers

A fish's body is covered with scales, so the second word names the covering of the first creature's body. A bird's body is covered with **feathers**.

6. Answer: (B) 3

The middle line splits the large triangle into two smaller triangles. Counting the two small triangles plus the large outer triangle itself gives $2 + 1 = 3$ triangles in all.

7. Answer: (C) 13

Farah herself is counted in both positions, so she must not be added twice.

Total = $6 + 8 - 1 = 13$ people.

8. Answer: (B) North

Turning 90° clockwise from south faces him west. Turning another 90° clockwise from west faces him **north**.

9. Answer: (D) HKUJ

Each letter of DOLL moved two places forward gives FQNN, confirming the rule. Applying the same shift to FISH: F $\rightarrow$ H, I $\rightarrow$ K, S $\rightarrow$ U and H $\rightarrow$ J, giving **HKUJ**.

10. Answer: (A) Priya

From the clues, Priya is taller than Omar, and Omar is taller than Naina, so the order so far is Priya > Omar > Naina.

Since Qadir is the tallest of all four, the full order is Qadir > Priya > Omar > Naina.

The second tallest is **Priya**.

11. Answer: (B) Root

The **root** grows down into the soil and has fine root hairs that take in water and dissolved minerals, which then travel up through the stem to the rest of the plant.

12. Answer: (C) Water

The fibrous husk traps air and does not soak up water easily, so a fallen coconut can float on rivers or the sea for a long distance before washing ashore. This is dispersal by **water**.

13. Answer: (D) Turtle

A toad, a salamander and a newt are all amphibians with moist skin that live part of their life in water. A **turtle** has dry, scaly skin and lays eggs on land, which makes it a reptile.

14. Answer: (A) Tadpole

A frog's egg hatches into a **tadpole**, which swims in water and breathes through gills, slowly growing legs and lungs before it can live on land as an adult frog.

15. Answer: (B) Walk easily on soft sand without sinking

The broad, flat feet spread the camel's weight over a larger area, so it does not sink into loose desert sand, letting it **walk easily on soft sand** for long distances.

16. Answer: (C) Condensation

The box before X shows water being heated by the sun (evaporation), and the box after X shows rain falling (precipitation). The missing stage between these two, where rising water vapour cools and changes into tiny droplets to form clouds, is **condensation**.

17. Answer: (D) Femur

The **femur**, the bone of the thigh running from the hip to the knee, is the longest and strongest bone in the human body. The humerus is in the upper arm, and the tibia and radius are shorter bones of the leg and forearm.

18. Answer: (C) Molars

Molars are the broad, flat teeth at the back of the jaw and are used to crush and grind food before it is swallowed. Incisors cut food and canines tear it.

19. Answer: (A) Mouth

As soon as food enters the **mouth**, the teeth break it into small pieces and saliva starts acting on it, so digestion begins here, well before the food reaches the stomach.

20. Answer: (B) Bleeding gums (scurvy)

A long-term shortage of vitamin C causes **bleeding gums**, a condition called scurvy. Citrus fruits such as orange and amla are rich sources of vitamin C.

21. Answer: (C) Rice

Rice is rich in carbohydrates, which the body burns for quick energy. Pulses, fish and eggs are chiefly protein foods that build and repair the body instead.

22. Answer: (D) Fat

An oily, translucent mark that does not disappear on drying is the standard test for **fat** in a food item. The starch test instead uses iodine solution turning blue-black.

23. Answer: (A) Gas

A **gas** spreads out and fills whatever container it is put into, taking up all the available space, so it has neither a fixed shape nor a fixed volume. A solid keeps both, and a liquid keeps a fixed volume while changing shape.

24. Answer: (B) Gravity

The earth's **gravity** pulls every object straight towards its centre, which is why the mango falls downward rather than moving sideways.

25. Answer: (C) Insulators of heat

Plastic and wood do not let heat pass through them easily, so they stay cool to touch even when the pot itself is hot. Materials that behave this way are called **insulators of heat**.

26. Answer: (D) Inclined plane

A flat sloping surface used to raise a load gradually, instead of lifting it straight up, is called an **inclined plane**. It reduces the effort needed at the cost of pushing the load over a longer distance.

27. Answer: (A) Air takes up space inside the bottle

The bottle looks empty but is really full of air, and that trapped **air takes up space** inside it. With the cap closed, the air cannot escape, so it resists being squeezed into a smaller space.

28. Answer: (B) Shadow A

A pole standing nearer to a lamp blocks a wider spread of the light rays before they diverge, so it casts a longer shadow than the same pole placed farther away. In the figure, the shadow drawn next to the nearer pole is clearly the longer one, so **Shadow A** belongs to the pole standing closer to the lamp.

29. Answer: (C) Straight

Light rays travel in a **straight** line, so when an object blocks them, a sharply outlined dark shape is formed exactly where the light cannot reach — this is the shadow.

30. Answer: (D) The greenhouse effect

Gases such as carbon dioxide let sunlight in but trap the heat that would otherwise escape back into space, warming the earth's surface over time. This gradual warming caused by trapped gases is called **the greenhouse effect**.

31. Answer: (C) (i) and (iii) only

Statement (i) is true; the heart continuously pumps blood to every part of the body. Statement (ii) is false — digestion continues after the stomach, in the small intestine, where most nutrients finally pass into the blood. Statement (iii) is true; as a child grows, soft cartilage hardens into bone and some separate bones fuse together. Hence **(i) and (iii)** are correct.

32. Answer: (A) Both A and R are true, and R is the correct explanation of A.

Both statements are true. Earthworms burrow through the soil, which loosens it and lets air and water enter more easily, and their waste enriches the soil with nutrients — this is exactly why they are valued by farmers. So **R correctly explains why A is true**.

33. Answer: (A) (2), (1), (3), (4)

The sun first heats water bodies, causing water to change into vapour and rise — this is evaporation (2). The rising vapour cools and turns into tiny droplets that form clouds — this is condensation (1). The droplets grow heavy and fall as rain or snow — precipitation (3). This water then gathers again in rivers, lakes and oceans — collection (4). The correct order is **evaporation, condensation, precipitation, collection**.

34. Answer: (B) Water, then suitable warmth

Jar P and Jar R differed only in whether the cotton wool was damp or dry, and only the damp one sprouted, showing that **water** is needed for germination. Jar P and Jar Q differed only in temperature, and only the warmer one sprouted, showing that **suitable warmth** is also needed. Together the two comparisons show germination needs water, then suitable warmth.

35. Answer: (C) P-1, Q-4, R-2, S-3

A duck has **webbed feet that help it swim** (1). A fish has **gills and a streamlined body that help it swim** (4). An earthworm has **moist skin that helps it breathe underground** (2). An owl has **large eyes that help it see well at night** (3). Hence P-1, Q-4, R-2, S-3.