

Full Practice Exam — Set 3

Science · Class 4 · Full Syllabus Practice Exam

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

- The numbers in this pattern double each time. What comes next? 5, 10, 20, 40, ____
 (A) 80 (B) 85
 (C) 90 (D) 95
- Find the **odd one out**: 8, 27, 64, 90
 (A) 8 (B) 27
 (C) 64 (D) 90
- Spider : Web :: Beaver : ____
 (A) Nest (B) Dam
 (C) Hive (D) Burrow
- What comes next in the letter series? A, C, F, J, ____
 (A) L (B) M
 (C) N (D) O
- In a row of children, Meera is 5th from the left end and 9th from the right end. How many children are there in the row?
 (A) 11 (B) 12
 (C) 13 (D) 14
- A boy is facing north. He turns 90° clockwise, walks a few steps, and then turns another 90° clockwise. Which direction is he facing now?
 (A) South (B) East
 (C) West (D) North
- Today is Sunday. What day of the week will it be after 17 days?
 (A) Thursday (B) Wednesday
 (C) Friday (D) Saturday

8. How many **rectangles** of any size are there in the figure below?



Fig. 8.1 — A rectangle divided into three equal columns

(A) 5

(B) 6

(C) 7

(D) 8

9. In a certain code, every letter of a word is moved one place forward in the alphabet, so MANGO is written as NBOHP. Using the same rule, how is APPLE written?

(A) AQQMF

(B) BPPME

(C) BQQME

(D) BQQMF

10. Manoj is the father of Riya. Riya is the sister of Kabir. Kabir is the son of Sunita. How is Sunita related to Manoj?

(A) Wife

(B) Mother

(C) Daughter

(D) Sister

Section 2 — Science

Q11–Q30 · 1 mark each

11. Besides sunlight and water, which gas does a leaf take in from the air to make its own food?

(A) Oxygen

(B) Carbon dioxide

(C) Nitrogen

(D) Hydrogen

12. The figure shows a labelled plant growing in soil. Which labelled part carries water and minerals upward from the soil to the leaves and flower?

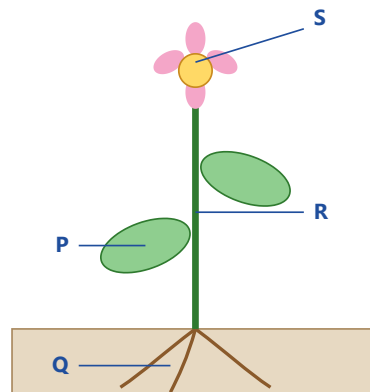


Fig. 12.1 — Parts of a flowering plant

(A) P

(B) Q

(C) R

(D) S

13. The fruit of a certain weed is covered with tiny hooked spines that cling to the fur of passing animals as they brush past it. This fruit is most likely dispersed by _____.

(A) Water

(B) Wind

(C) Animals

(D) Bursting of the pod

14. Which of these animals is a **mammal**?
- (A) Ostrich (B) Crocodile
(C) Salmon (D) Bat
15. In the life cycle of a housefly, the soft, legless stage that hatches from the egg and feeds on rotting matter is called the ____.
- (A) Maggot (larva) (B) Pupa
(C) Nymph (D) Cocoon
16. Polar bears have a thick layer of fat under their skin along with dense fur. Together, these mainly help a polar bear to ____.
- (A) Swim faster underwater (B) Stay warm in the freezing cold
(C) See better in the dark (D) Climb icy cliffs more easily
17. Which part of the human skeleton curves around and protects the heart and lungs?
- (A) Backbone (B) Skull
(C) Rib cage (D) Pelvis
18. The point where two bones meet and are able to move against each other, allowing the body to bend, is called a ____.
- (A) Muscle (B) Nerve
(C) Tendon (D) Joint
19. Which organ continuously pumps blood to every part of the body?
- (A) Heart (B) Lungs
(C) Liver (D) Kidney
20. In which organ is food mixed with digestive juices and churned into a soft, pulpy mass?
- (A) Food pipe (B) Stomach
(C) Mouth (D) Small intestine
21. Study the diagram showing the path food follows through the digestive system. In which of these organs is most of the leftover water finally absorbed from the undigested waste, before it leaves the body?

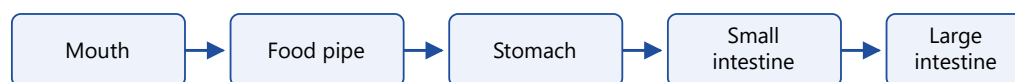


Fig. 21.1 — Path of food through the digestive system

- (A) Mouth (B) Stomach
(C) Large intestine (D) Small intestine
22. A child who rarely goes outdoors in the sun and avoids drinking milk develops soft, weak, and slightly bent bones. This condition is caused mainly by a shortage of ____.
- (A) Iron (B) Vitamin B
(C) Vitamin K (D) Vitamin D
23. Which nutrient, found in foods such as ghee, butter and nuts, gives the body a highly concentrated form of energy and also helps keep it warm?
- (A) Fats (B) Vitamins
(C) Minerals (D) Water

24. Plants constantly lose extra water as vapour through tiny pores on the surface of their leaves. This process is called _____.
 (A) Evaporation (B) Transpiration
 (C) Condensation (D) Precipitation
25. Which natural source of energy heats up the water in oceans, rivers and lakes and keeps the water cycle going?
 (A) The Wind (B) The Moon
 (C) The Sun (D) The Earth's core
26. Which gas makes up the largest portion of the air around us?
 (A) Oxygen (B) Carbon dioxide
 (C) Argon (D) Nitrogen
27. A lit candle is covered with an upturned glass jar. After a few seconds, the flame goes out. This happens mainly because _____.
 (A) the oxygen trapped inside the jar gets used up (B) the wax quickly melts away
 (C) the jar blocks out all the light (D) the candle runs out of wick
28. Frosted glass allows some light to pass through it, but objects on the other side cannot be seen clearly through it. Such a material is called _____.
 (A) Transparent (B) Translucent
 (C) Opaque (D) Luminous
29. A pair of scissors cuts through paper using two blades that turn about a fixed pin joining them. This makes scissors an example of a simple machine called a/an _____.
 (A) Wheel and axle (B) Pulley
 (C) Lever (D) Screw
30. Cutting down large numbers of trees to clear land for roads and buildings, without planting new ones in their place, is called _____, and it reduces the amount of oxygen released into the surrounding air.
 (A) Afforestation (B) Composting
 (C) Recycling (D) Deforestation

Achievers Section

Q31–Q35 · 2 marks each

31. Consider the following statements.
 (i) The lungs take in oxygen from the air and release carbon dioxide out of the body.
 (ii) A magnet attracts objects made of iron and steel.
 (iii) All liquids evaporate at exactly the same speed.
 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): We cannot see distant stars in the sky during the daytime.
 Reason (R): Stars stop shining during the day and begin shining again only after sunset.
 (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. Match each simple machine in Column I with a real-life example in Column II.

Column I	Column II
(P) Lever	(1) Steering wheel of a car
(Q) Pulley	(2) A seesaw in a park
(R) Inclined plane	(3) A ramp leading into a building
(S) Wheel and axle	(4) A rope and wheel used to hoist a flag

Table 33.1

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

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

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

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

34. Arrange the following parts of the human digestive system in the order in which swallowed food actually passes through them: (1) Stomach (2) Small intestine (3) Food pipe (oesophagus) (4) Large intestine

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

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

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

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

35. Two identical metal spoons are dipped to the same depth in a cup of hot water — one spoon has a wooden handle and the other has a plain metal handle. After a minute, the metal handle feels much hotter to hold than the wooden handle, even though both spoons are dipped equally deep in the same hot water. What does this show?

(A) The metal spoon has less water touching it

(B) Wood absorbs more heat than metal

(C) Metal is a better conductor of heat than wood

(D) Wooden handles do not heat up at all

Answer Key

1	A	2	D	3	B	4	D	5	C
6	A	7	B	8	B	9	D	10	A
11	B	12	C	13	C	14	D	15	A
16	B	17	C	18	D	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	A	32	C	33	A	34	B	35	C

Solutions

1. Answer: (A) 80

Each number in the pattern is **twice** the one before it: 5, 10, 20, 40. Doubling 40 gives $40 \times 2 = 80$.

2. Answer: (D) 90

$8 = 2 \times 2 \times 2$, $27 = 3 \times 3 \times 3$ and $64 = 4 \times 4 \times 4$ — each is a whole number multiplied by itself three times. **90** cannot be written this way, so it is the odd one out.

3. Answer: (B) Dam

A spider builds a web as its home, so the second word names something an animal builds for itself. A beaver builds a **dam** across a stream using sticks and mud. A bird builds a nest, a bee builds a hive and a rabbit digs a burrow.

4. Answer: (D) O

Look at the gap between each pair of letters: A to C is 2 places, C to F is 3 places, F to J is 4 places. The gap grows by one letter each time, so the next gap is 5 places.

J + 5 places = **O**.

5. Answer: (C) 13

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

Total = $5 + 9 - 1 = 13$ children.

6. Answer: (A) South

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

7. Answer: (B) Wednesday

Every 7 days brings the same weekday round again, so after 14 days it will again be Sunday.

$17 - 14 = 3$ more days: Monday, Tuesday, **Wednesday**.

8. Answer: (B) 6

The whole outline is one rectangle, and each of the three equal columns is a rectangle on its own. Any two neighbouring columns joined together also form a rectangle.

3 (single columns) + 2 (joined pairs) + 1 (the whole outline) = **6** rectangles in all.

9. Answer: (D) BQQMF

Each letter of MANGO moved one place forward gives NBOHP, confirming the rule. Applying the same shift to APPLE: A → B, P → Q, P → Q, L → M and E → F, giving **BQQMF**.

10. Answer: (A) Wife

Kabir is the son of Sunita, and Riya is Kabir's sister, so Sunita is also the mother of Riya. Manoj is the father of Riya.

Since Sunita and Manoj are the mother and father of the same child, Sunita is Manoj's **wife**.

11. Answer: (B) Carbon dioxide

A leaf uses sunlight energy to combine water from the soil with **carbon dioxide** taken in from the air, making food for the plant and releasing oxygen as a by-product.

12. Answer: (C) R

Water and minerals taken in by the roots must travel upward through the plant to reach the leaves and flower, and this transport happens through the **stem**, labelled R. P points to a leaf, Q points to a root, and S points to the flower.

13. Answer: (C) Animals

The hooked spines catch onto the fur or feathers of a passing animal, which then carries the seeds far away before they drop off or are groomed out. This is dispersal by **animals**.

14. Answer: (D) Bat

A mammal has hair or fur and feeds its young on milk from the mother's body. Although a **bat** can fly, it is covered in fur and feeds its young milk, which makes it a mammal. The ostrich and salmon lay eggs and the crocodile is a reptile.

15. Answer: (A) Maggot (larva)

The order is egg → **maggot (larva)** → pupa → adult fly. The maggot is soft-bodied and legless, and spends its time feeding before it changes into a pupa.

16. Answer: (B) Stay warm in the freezing cold

The layer of fat traps heat inside the body, and the dense fur adds another barrier against the cold air and water outside, together helping the polar bear **stay warm in the freezing cold** of the Arctic.

17. Answer: (C) Rib cage

The **rib cage** is a curved framework of bones in the chest that shields the soft heart and lungs from injury. The skull protects the brain, the backbone supports the body, and the pelvis protects organs in the lower abdomen.

18. Answer: (D) Joint

A **joint** is the point where two bones meet. Some joints, such as the one at the knee, allow a wide range of movement, letting the body bend and twist.

19. Answer: (A) Heart

The **heart** is a muscular pump that beats continuously, pushing blood through the blood vessels to reach every part of the body. The lungs exchange gases, the liver helps digestion, and the kidneys filter blood.

20. Answer: (B) Stomach

The **stomach** is a muscular bag that squeezes and churns food while mixing it with digestive juices, turning it into a soft, pulpy mass before it passes on to the small intestine.

21. Answer: (C) Large intestine

The diagram shows food moving from the mouth through the food pipe, stomach and small intestine, and finally into the **large intestine**. Digestion and absorption of nutrients are mostly finished by the time waste reaches this last part, so its main job is to absorb the remaining water before the waste is removed from the body.

22. Answer: (D) Vitamin D

Vitamin D helps the body absorb calcium to build strong, hard bones. It is made in the skin with the help of sunlight and is also found in milk. A long-term shortage leads to soft, bent bones.

23. Answer: (A) Fats

Fats pack more energy into a smaller amount of food than any other nutrient, and a layer of fat under the skin also helps the body stay warm. Vitamins and minerals are needed only in tiny amounts and do not mainly supply energy.

24. Answer: (B) Transpiration

The loss of water vapour from the leaves of a plant is called **transpiration**. It also helps pull more water up from the roots through the stem, in the same way a straw draws up a drink.

25. Answer: (C) The Sun

The Sun heats the surface of oceans, rivers and lakes, causing water to evaporate and rise as vapour. Without this constant supply of heat, the water cycle would not keep repeating.

26. Answer: (D) Nitrogen

Air is a mixture of gases, and **nitrogen** makes up the largest share of it, followed by oxygen. Carbon dioxide and argon are present only in very small amounts.

27. Answer: (A) the oxygen trapped inside the jar gets used up

A flame needs a steady supply of oxygen to keep burning. Once the jar is placed over the candle, no fresh air can get in, so **the oxygen trapped inside the jar gets used up** and the flame goes out.

28. Answer: (B) Translucent

A material that lets only some light pass through, so that objects behind it appear blurred rather than clear, is called **translucent**. A transparent material lets objects be seen clearly through it, and an opaque material blocks light completely.

29. Answer: (C) Lever

A **lever** is a rigid bar or blade that turns about a fixed point called a fulcrum. Each blade of a pair of scissors acts as a lever turning about the pin that joins them, making the whole tool a double lever.

30. Answer: (D) Deforestation

Clearing away forests on a large scale without replacing the trees is called **deforestation**. Since trees release oxygen and absorb carbon dioxide, cutting them down reduces the fresh oxygen entering the air nearby.

31. Answer: (A) (i) and (ii) only

Statement (i) is true; breathing in oxygen and breathing out carbon dioxide is the main job of the lungs. Statement (ii) is true; magnets pull on iron and steel objects but not on materials such as wood or plastic. Statement (iii) is false — different liquids evaporate at different speeds; for example, petrol evaporates much faster than water. Hence **(i) and (ii)** are correct.

32. Answer: (C) A is true, but R is false.

Statement A is true — the bright daylight from the sun overpowers the much fainter light of distant stars, so we cannot see them. Statement R is false, since stars shine continuously at all times; they do not switch off during the day and on at night. So **A is true, but R is false**.

33. Answer: (A) P-2, Q-4, R-3, S-1

A **lever** is a rigid bar that turns about a fixed point, like a seesaw (2). A **pulley** is a wheel with a rope running over it, used to hoist a flag (4). An **inclined plane** is a sloping surface such as a ramp leading into a building (3). A **wheel and axle** turns together as one unit, as in the steering wheel of a car (1). Hence P-2, Q-4, R-3, S-1.

34. Answer: (B) (3), (1), (2), (4)

Swallowed food first travels down the food pipe (3) into the stomach (1), where it is churned and partly digested. It then passes into the small intestine (2), where digestion is completed and nutrients are absorbed, and finally reaches the large intestine (4), where water is absorbed from what remains. The correct order is **food pipe, stomach, small intestine, large intestine**.

35. Answer: (C) Metal is a better conductor of heat than wood

Both handles are equally far from the hot water and dipped to the same depth, so the only difference between them is the material. Since the metal handle heats up noticeably faster and feels hotter, this shows that **metal is a better conductor of heat than wood**, which conducts heat only slowly.