

Full Practice Exam — Set 3

Science · Class 5 · Full Syllabus Practice Exam

TIME 60 minutes	QUESTIONS 50	TOTAL MARKS 60	MAX. SCORE ___ / 60
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Name: _____ Class/Sec: _____ Date: _____

INSTRUCTIONS

- There are **50 questions** in this paper. All questions are compulsory.
- Each question has four options (A), (B), (C) and (D). Exactly **one** option is correct.
- Questions 1–45 carry **1 mark** each. Questions 46–50 (Achievers Section) carry **3 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 series? 2, 6, 12, 20, 30, ____
 (A) 40 (B) 42
 (C) 45 (D) 48
- Find the **odd one out**: 11, 13, 17, 21
 (A) 11 (B) 13
 (C) 17 (D) 21
- 8 is related to 64 in the same way as 9 is related to ____?
 (A) 72 (B) 81
 (C) 90 (D) 99
- Thermometer is related to Temperature as Barometer is related to ____?
 (A) Humidity (B) Wind
 (C) Rain (D) Pressure
- The dot patterns below follow a rule. How many dots will Pattern 4 have?

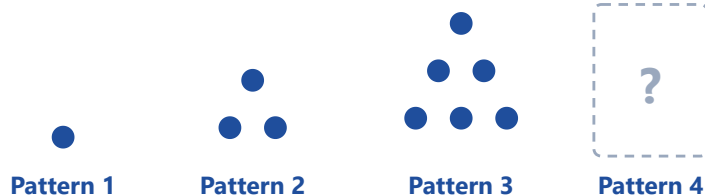


Fig. 5.1 — Dot patterns growing row by row

- (A) 8 (B) 9
 (C) 10 (D) 12

6. In a certain code, CHAIR is written as DIBJS. How is TABLE written in the same code?
- (A) UBCMF (B) UBCLF
(C) VBCMF (D) UBBMF
7. Amit is the son of Priya. Priya is the only daughter of Mr. Verma. How is Amit related to Mr. Verma?
- (A) Brother (B) Son
(C) Nephew (D) Grandson
8. What comes next in the series? A1, C3, E5, G7, ____
- (A) I9 (B) I8
(C) H9 (D) I11
9. Rahul is 3 years older than his sister Priya. Five years ago, Priya was 7 years old. How old is Rahul now?
- (A) 15 (B) 12
(C) 10 (D) 18
10. In a race, Neha finished before Om but after Farah. Om finished before Vikram. Who finished the race first?
- (A) Neha (B) Om
(C) Farah (D) Vikram

Section 2 — Science

Q11–Q45 · 1 mark each

11. Which part of a flower is the male reproductive part that produces pollen grains?
- (A) Ovary (B) Sepal
(C) Stigma (D) Stamen
12. The transfer of pollen grains from the anther of one flower to the stigma of another flower is called ____.
- (A) Pollination (B) Germination
(C) Fertilisation (D) Transpiration
13. Which tissue in a plant carries water and dissolved minerals upward from the roots to the leaves?
- (A) Phloem (B) Xylem
(C) Cambium (D) Epidermis
14. Seeds of plants such as the drumstick and the maple have flat, wing-like structures attached to them. These wings mainly help the seeds to be ____.
- (A) Stored inside the fruit (B) Protected from insects
(C) Carried away and scattered by the wind (D) Dissolved in rainwater

15. Three identical bean seedlings, P, Q and R, were kept for two weeks in full sunlight, partial shade and a dark cupboard respectively. Study the bar chart of their heights. Which condition produced the tallest seedling, and what does this show?

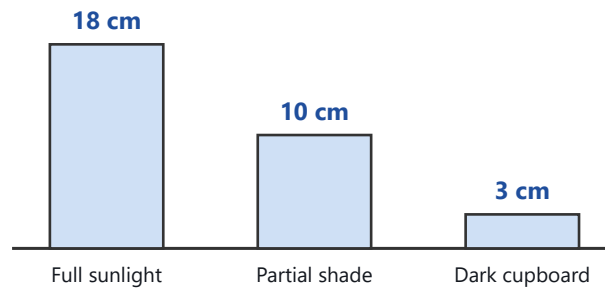


Fig. 15.1 — Height of seedlings after two weeks

- (A) Full sunlight; plants need sunlight to grow well (B) Dark cupboard; plants grow best without light
(C) Partial shade; a little light is harmful (D) All three grew to the same height
16. Which of these is a reptile, with dry scaly skin and a body temperature that changes with its surroundings?
(A) Sparrow (B) Frog
(C) Goldfish (D) Crocodile
17. Birds have light, hollow bones instead of solid heavy ones. This mainly helps a bird to _____.
(A) Reduce its body weight, making it easier to fly (B) Swim underwater for a long time
(C) Store extra fat for winter (D) Grow taller than other animals
18. A fish has a streamlined body and fins instead of legs. These features mainly help the fish to _____.
(A) Breathe air directly from the atmosphere (B) Move easily and quickly through water
(C) Change colour to hide from predators (D) Store food for the winter
19. Bats fly and hunt insects in complete darkness by making high-pitched sounds and listening for the sounds bouncing back off objects. This ability is called _____.
(A) Migration (B) Camouflage
(C) Echolocation (D) Hibernation
20. A whale spends its entire life in the ocean, yet it must rise to the surface every so often. Why?
(A) It needs to lay its eggs above the water (B) It breathes using gills hidden under its skin
(C) It needs sunlight to make its own food (D) It breathes air using lungs, like other mammals
21. Soon after food is swallowed, which organ churns it and mixes it with digestive juices?
(A) Stomach (B) Oesophagus
(C) Liver (D) Trachea
22. Most of the digested food is absorbed into the bloodstream in the _____.
(A) Stomach (B) Small intestine
(C) Large intestine (D) Oesophagus
23. The exchange of oxygen and carbon dioxide between the air we breathe and the blood takes place mainly in the _____.
(A) Trachea (B) Stomach
(C) Lungs (D) Heart

- 24.** Which part of the human skeleton protects the brain from injury?
- (A) Collar bone (B) Rib cage
(C) Backbone (D) Skull
- 25.** The chisel-shaped teeth at the front of the mouth, used mainly for cutting and biting food, are called _____.
(A) Incisors (B) Premolars
(C) Canines (D) Molars
- 26.** Which organ acts as the body's control centre, receiving messages from the sense organs and sending instructions to muscles through nerves?
- (A) Heart (B) Brain
(C) Liver (D) Kidney
- 27.** Foods like rice, wheat and potatoes are rich in carbohydrates. Carbohydrates mainly provide the body with _____.
(A) Protection from disease (B) Extra height
(C) Energy (D) New blood cells
- 28.** Foods such as pulses, eggs and milk are rich in a nutrient mainly needed for the growth and repair of body tissues. This nutrient is _____.
(A) Fat (B) Starch
(C) Fibre (D) Protein
- 29.** A person whose diet regularly lacks iodine may develop a swelling in the neck. This condition is called _____.
(A) Goitre (B) Scurvy
(C) Rickets (D) Anaemia
- 30.** A person who does not eat enough iron-rich food may develop a condition in which the blood cannot carry enough oxygen around the body. This condition is called _____.
(A) Goitre (B) Anaemia
(C) Night blindness (D) Rickets
- 31.** Doctors sometimes give a person a weakened or dead form of a disease-causing germ so that the body learns to fight that disease later. This is called _____.
(A) Digestion (B) Pollination
(C) Vaccination (D) Respiration
- 32.** Eating a lot of sugary food and not brushing the teeth regularly can lead to small holes forming in the teeth. These holes are called _____.
(A) Blisters (B) Ulcers
(C) Fractures (D) Cavities
- 33.** An illness such as the common cold, which can pass from an infected person to a healthy person, is called a _____ disease.
(A) Communicable (B) Hereditary
(C) Deficiency (D) Permanent

34. The continuous journey of water from the earth's surface into the air and back again, through evaporation, condensation and precipitation, is called the _____.
 (A) Food chain (B) Water cycle
 (C) Life cycle (D) Rock cycle
35. Large numbers of trees are cut down in an area for timber and farmland, a process called deforestation. This is most likely to lead to _____.
 (A) Cooler temperatures in that area (B) More oxygen in the air than before
 (C) Increased soil erosion and loss of homes for wildlife (D) Stronger tree roots holding the soil together
36. Coal and petroleum are called fossil fuels because they were formed from _____.
 (A) Rocks that melted deep inside the earth (B) Metal ores mixed with sand
 (C) Water evaporating from ancient oceans (D) The remains of dead plants and animals buried for millions of years
37. Collecting rain as it falls and storing it for later use, instead of letting it run off and drain away, is called _____.
 (A) Rainwater harvesting (B) Water pollution
 (C) Water cycle (D) Desalination
38. A wheelbarrow, a pair of scissors and a bottle opener are all examples of a simple machine called a _____.
 (A) Pulley (B) Lever
 (C) Screw (D) Wedge
39. An apple falls straight down from a tree instead of floating away into the sky. This happens because of the earth's _____.
 (A) Magnetism (B) Rotation
 (C) Gravity (D) Friction
40. A magnet will pull towards itself objects made of _____, but not objects made of wood, plastic or rubber.
 (A) Any solid material (B) Glass, paper and cloth
 (C) Gold, silver and copper (D) Iron, nickel and cobalt
41. The diagrams show light rays falling on three different materials — a sheet of clear glass (P), a sheet of butter paper (Q), and a wooden board (R). Study how the light behaves with each. Which material is opaque?

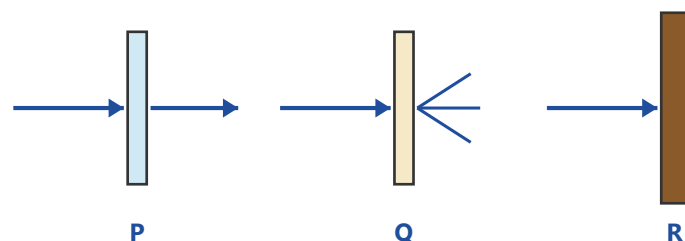


Fig. 41.1 — Light falling on three materials

- (A) P (B) Q
 (C) R (D) Both P and Q

42. The moon does not produce any light of its own. It can still be seen shining brightly at night because it _____.
 (A) Reflects sunlight falling on it (B) Absorbs starlight and glows
 (C) Is on fire at its core (D) Produces its own light like the sun
43. A rainbow is sometimes seen in the sky after rain, when sunlight passes through tiny drops of water suspended in the air. The rainbow's many colours appear because the water drops _____.
 (A) Absorb all the sunlight completely (B) Split the white sunlight into its different colours
 (C) Add colour to the plain sunlight (D) Reflect only red-coloured light
44. Sound is produced whenever an object _____.
 (A) Becomes colder (B) Stays completely still
 (C) Vibrates rapidly to and fro (D) Reflects light
45. The loud, unwanted sound from sources such as traffic, loudspeakers and factory machines, which can harm hearing and disturb sleep, is called _____.
 (A) Air pollution (B) Light pollution
 (C) Water pollution (D) Noise pollution

Achievers Section

Q46–Q50 · 3 marks each

46. Consider the following statements.
 (i) Plants absorb water only through their leaves, never through their roots.
 (ii) The stamen is the male part of a flower and produces pollen grains.
 (iii) Sound can travel through empty space (a vacuum) just as easily as it travels through air.
 Which of the statements is/are correct?
 (A) (i) and (ii) only (B) (ii) only
 (C) (i) and (iii) only (D) All three
47. Assertion (A): Earthworms are considered useful to farmers.
 Reason (R): Earthworms have a long, cylindrical body with no legs.
 (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
48. Match each item in Column I with the correct description in Column II.

Column I	Column II
(P) Vocal cords moving rapidly to and fro	(1) Echolocation
(Q) Water rising as vapour and later falling as rain	(2) Photosynthesis
(R) A bat sensing prey using reflected sound	(3) Vibration
(S) A green leaf making its own food using sunlight	(4) Evaporation and precipitation

Table 48.1

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

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Answer Key

1	B	2	D	3	B	4	D	5	C
6	A	7	D	8	A	9	A	10	C
11	D	12	A	13	B	14	C	15	A
16	D	17	A	18	B	19	C	20	D
21	A	22	B	23	C	24	D	25	A
26	B	27	C	28	D	29	A	30	B
31	C	32	D	33	A	34	B	35	C
36	D	37	A	38	B	39	C	40	D
41	C	42	A	43	B	44	C	45	D
46	B	47	B	48	A	49	B	50	C

Solutions

1. Answer: (B) 42

Look at the difference between consecutive terms: $6-2=4$, $12-6=6$, $20-12=8$, $30-20=10$.

The difference itself increases by 2 each time, so the next difference is 12.

$30 + 12 = 42$.

2. Answer: (D) 21

11, 13 and 17 are **prime numbers** — each can be divided exactly only by 1 and itself. $21 = 3 \times 7$, so it has factors other than 1 and itself, making it the odd one out.

3. Answer: (B) 81

8 is related to 64 because $8 \times 8 = 64$, that is, 64 is 8 multiplied by itself.

In the same way, 9 multiplied by itself is $9 \times 9 = 81$.

4. Answer: (D) Pressure

A thermometer is an instrument used to measure temperature. In the same way, a barometer is an instrument used to measure **pressure**, specifically the pressure of the atmosphere.

5. Answer: (C) 10

Pattern 1 has 1 dot, Pattern 2 has $1 + 2 = 3$ dots, and Pattern 3 has $1 + 2 + 3 = 6$ dots — each new pattern adds one more row than the last, with one more dot in that row.

Pattern 4 would add a row of 4 dots to the 6 already there: $6 + 4 = 10$.

6. Answer: (A) UBCMF

Each letter is replaced by the next letter of the alphabet: $C \rightarrow D$, $H \rightarrow I$, $A \rightarrow B$, $I \rightarrow J$, $R \rightarrow S$.

Applying the same shift to TABLE: $T \rightarrow U$, $A \rightarrow B$, $B \rightarrow C$, $L \rightarrow M$, $E \rightarrow F$, giving **UBCMF**.

7. Answer: (D) Grandson

Priya is Mr. Verma's daughter, which makes Mr. Verma her father. Amit is Priya's son, so Amit is the son of Mr. Verma's daughter — that makes Amit Mr. Verma's **grandson**.

8. Answer: (A) I9

The letters skip one place each time — A, C, E, G, **I** — while the numbers are the odd numbers in order — 1, 3, 5, 7, **9**.

The next term pairs these two: **I9**.

9. Answer: (A) 15

Five years ago Priya was 7, so Priya's age now is $7 + 5 = 12$ years.

Rahul is 3 years older than Priya, so Rahul's age now is $12 + 3 = 15$ years.

10. Answer: (C) Farah

Neha finished after Farah, so Farah is ahead of Neha. Neha also finished before Om, and Om finished before Vikram.

Putting these in order from first to last gives Farah, Neha, Om, Vikram, so **Farah** finished first.

11. Answer: (D) Stamen

The **stamen** is the male part of a flower. Each stamen has a thin filament topped by an anther, and the anther produces tiny pollen grains.

12. Answer: (A) Pollination

Pollination is the movement of pollen from the anther to the stigma, often carried out by insects, birds or the wind. It must happen before a flower can be fertilised and form seeds.

13. Answer: (B) Xylem

Xylem is made up of tube-like cells that form a continuous pathway from the roots to the leaves, carrying water and minerals upward. Phloem carries food made in the leaves to other parts of the plant instead.

14. Answer: (C) Carried away and scattered by the wind

The wing-like structure allows the seed to spin and glide through the air. This lets the wind carry the seed far away from the parent plant, which is a way of **seed dispersal** that reduces crowding and competition for the same patch of soil.

15. Answer: (A) Full sunlight; plants need sunlight to grow well

The chart shows the seedling kept in **full sunlight** grew tallest at 18 cm, followed by partial shade at 10 cm, while the one kept in the dark grew only 3 cm. Since light was the only condition that differed, this shows that plants need **sunlight** to grow well and make their food.

16. Answer: (D) Crocodile

A **crocodile** has dry skin covered with tough scales and cannot keep its own body temperature steady, so it basks in the sun to warm up. Frogs are amphibians, goldfish are fish, and sparrows are birds.

17. Answer: (A) Reduce its body weight, making it easier to fly

Hollow bones weigh much less than solid bones of the same size. This **reduces the bird's overall weight**, so less effort is needed to lift the body off the ground and stay in the air while flying.

18. Answer: (B) Move easily and quickly through water

A streamlined, tapering body meets less resistance as it slices through water, and the fins push and steer the fish. Together these features let a fish **move easily and quickly through water**.

19. Answer: (C) Echolocation

Echolocation is the use of reflected sound to sense the surroundings. A bat's cries bounce off nearby objects and insects, and by listening to the returning sound the bat can tell their distance and direction, even with no light at all.

20. Answer: (D) It breathes air using lungs, like other mammals

A whale is a mammal, and like other mammals it **breathes air using lungs**, not gills. It must surface regularly to take in fresh air through its blowhole, even though it lives its whole life in water.

21. Answer: (A) Stomach

Food passes down the oesophagus into the **stomach**, whose muscular walls churn it while glands release digestive juices. This breaks the food down into a soft, thick paste ready for further digestion.

22. Answer: (B) Small intestine

The **small intestine** is long and lined with tiny finger-like projections that increase its inner surface area, allowing digested food to pass efficiently into the blood. The large intestine mainly absorbs water from what remains.

23. Answer: (C) Lungs

Inside the **lungs**, the air we breathe in passes into millions of tiny air sacs surrounded by blood vessels. Oxygen moves from these air sacs into the blood, and carbon dioxide moves the other way, ready to be breathed out.

24. Answer: (D) Skull

The **skull** is a hard, rounded case of bone that encloses the brain on all sides, protecting this delicate organ from knocks and injury.

25. Answer: (A) Incisors

Incisors are the flat, sharp-edged teeth at the front of the mouth. Their chisel shape is well suited to biting off and cutting pieces of food, while the molars at the back grind food into smaller pieces.

26. Answer: (B) Brain

The **brain** constantly receives signals from the eyes, ears, skin and other sense organs through nerves, and sends out instructions along nerves telling muscles how to respond. It is the body's control centre.

27. Answer: (C) Energy

Carbohydrates are broken down by the body to release **energy**, which powers everything from muscle movement to keeping the body warm. Rice, wheat and potatoes are all good sources of carbohydrates.

28. Answer: (D) Protein

Protein supplies the building blocks the body uses to grow new tissue and repair damaged cells. Pulses, eggs and milk are all rich sources of protein, which is why growing children need them in their diet.

29. Answer: (A) Goitre

The thyroid gland in the neck needs iodine to work properly. Without enough iodine it swells up as it tries to work harder, a condition called **goitre**. Iodised salt is used in many homes to prevent this.

30. Answer: (B) Anaemia

Iron is needed to make haemoglobin, the substance in red blood cells that carries oxygen. Too little iron in the diet leads to **anaemia**, leaving a person tired and short of breath, since their blood cannot carry enough oxygen.

31. Answer: (C) Vaccination

Vaccination trains the body's defences by introducing a harmless form of a germ. The body learns to recognise it and can respond quickly and strongly if it ever meets the real, harmful germ later.

32. Answer: (D) Cavities

Bacteria in the mouth feed on leftover sugar and produce acid that wears away the hard enamel of the teeth, leaving small holes known as **cavities**. Brushing regularly removes the sugar and bacteria before this damage can happen.

33. Answer: (A) Communicable

A **communicable** disease is one that can spread from one person to another, often through droplets in the air, water or direct contact. The common cold spreads easily this way, which is why sneezing into a tissue helps protect others.

34. Answer: (B) Water cycle

In the **water cycle**, the sun's heat evaporates water from oceans, rivers and lakes into vapour, the vapour condenses into clouds, and the water falls back to earth as rain or snow, ready to begin the journey again.

35. Answer: (C) Increased soil erosion and loss of homes for wildlife

Tree roots normally bind the soil together and their leaves break the force of falling rain. Once the trees are removed, rain washes the loose topsoil away more easily, and animals that depended on the trees for shelter and food lose their homes.

36. Answer: (D) The remains of dead plants and animals buried for millions of years

Over millions of years, the remains of dead plants and animals were buried under layers of rock and gradually changed by heat and pressure into coal and petroleum. Because they formed from ancient living things, they are called **fossil fuels**.

37. Answer: (A) Rainwater harvesting

Rainwater harvesting collects rain from rooftops or open ground and stores or channels it into the ground, instead of letting it run away uselessly. This helps recharge wells and reduces the demand on other water sources.

38. Answer: (B) Lever

A **lever** is a simple machine that turns or tilts around a fixed point to make lifting or cutting easier. A wheelbarrow, scissors and a bottle opener all use this turning action, even though they look quite different from one another.

39. Answer: (C) Gravity

The earth's **gravity** pulls every object near it towards the ground. This constant downward pull is why the apple falls straight down rather than moving off in any other direction.

40. Answer: (D) Iron, nickel and cobalt

Only a small group of metals, mainly **iron, nickel and cobalt**, are attracted by a magnet. Most other materials, including wood, plastic, rubber, and even metals like copper and gold, are not pulled by a magnet at all.

41. Answer: (C) R

Light passes straight through material P and only scatters a little while passing through material Q, but it is completely blocked at material R, with no light reaching the other side.

A material that lets no light through at all is **opaque**, so **R**, the wooden board, is the opaque material.

42. Answer: (A) Reflects sunlight falling on it

The moon has no light source of its own. Sunlight falls on its surface and bounces off in all directions, and some of this **reflected sunlight** reaches our eyes, which is why the moon appears to shine at night.

43. Answer: (B) Split the white sunlight into its different colours

Sunlight looks white but is actually made up of many colours mixed together. As it passes through the tiny water drops, it bends by different amounts for different colours and **splits into its separate colours**, which we see spread out as a rainbow.

44. Answer: (C) Vibrates rapidly to and fro

Every sound begins with something moving rapidly back and forth — a stretched string, a drum skin, or the vocal cords in our throat. This rapid to-and-fro movement is called **vibration**, and it is what produces sound.

45. Answer: (D) Noise pollution

Unwanted, excessively loud sound is known as **noise pollution**. Continued exposure to it can damage hearing over time, raise stress levels, and make it difficult to concentrate or sleep.

46. Answer: (B) (ii) only

Statement (i) is false, since plants absorb water mainly through the root hairs in their roots, not through their leaves. Statement (ii) is true, since the stamen, made up of a filament and an anther, is the flower's male part and produces pollen. Statement (iii) is false, because sound needs a medium such as air, water or a solid to travel through, and cannot pass through an empty vacuum at all. Hence only **(ii)** is correct.

47. Answer: (B) Both A and R are true, but R is not the correct explanation of A

Earthworms genuinely help farmers, so the assertion is true. It is also true that earthworms have a long, cylindrical, legless body. However, their usefulness comes from loosening and aerating the soil as they burrow and enriching it with their waste, not from their body shape. Since the reason does not explain the assertion, both statements are true but the reason is not the correct explanation.

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

The vocal cords moving rapidly to and fro produce sound by **vibration** (3). Water rising as vapour and later falling as rain describes **evaporation and precipitation**, part of the water cycle (4). A bat locating prey using reflected sound is using **echolocation** (1). A green leaf making its own food using sunlight is carrying out **photosynthesis** (2). Hence P-3, Q-4, R-1, S-2.

49. Answer: (B) Water is necessary for a seed to germinate and grow

Watering is the only condition that was different between the two pots, since the soil and the sunlight were the same for both. Since the watered seed sprouted and the unwatered seed did not, the difference in outcome must be explained by the difference in watering, showing that **water is necessary** for a seed to germinate and grow.

50. Answer: (C) 360

Number of beats in 5 minutes = beats per minute $\times$ number of minutes = $72 \times 5 = 360$ beats.