

Full Practice Exam — Set 1

Science · Class 7 · 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. Study every diagram and table carefully.

Section 1 — Logical Reasoning

Q1–Q10 · 1 mark each

- What comes next in the series? 2, 6, 18, 54, ____
 (A) 108 (B) 144
 (C) 162 (D) 216
- Find the **odd one out**: Malaria, Typhoid, Common cold, Tuberculosis
 (A) Malaria (B) Typhoid
 (C) Tuberculosis (D) Common cold
- What comes next in the letter series? Z, W, T, Q, ____
 (A) N (B) M
 (C) O (D) P
- In a certain code, GARDEN is written as 7-1-18-4-5-14. How is FLOWER be written in the same code?
 (A) 5-12-15-23-5-18 (B) 6-12-14-23-5-18
 (C) 6-11-15-23-5-18 (D) 6-12-15-23-5-18
- Pointing to a man, a woman said, 'His mother is the only daughter of my mother.' How is the woman related to the man?
 (A) Mother (B) Grandmother
 (C) Daughter (D) Sister
- In a class, Ravi is 9th from the top and 14th from the bottom. How many students are there in the class?
 (A) 21 (B) 22
 (C) 23 (D) 24
- A person walks 9 km south, then 12 km west. How far is he from his starting point?
 (A) 3 km (B) 15 km
 (C) 21 km (D) 108 km
- Which of these does **not** belong with the rest?
 (A) Aerobic respiration (B) Anaerobic respiration
 (C) Photosynthesis (D) Fermentation

9. $7 : 49 :: 11 : \underline{\hspace{2cm}}$
- (A) 99 (B) 110
(C) 121 (D) 132
10. If today is Tuesday, what day will it be after 24 days?
- (A) Monday (B) Saturday
(C) Sunday (D) Friday

Section 2 — Science

Q11–Q45 · 1 mark each

11. Organisms that make their own food are called _____.
(A) Autotrophs (B) Heterotrophs
(C) Saprotrophs (D) Parasites
12. Cuscuta (amarbel) grows on other plants and takes food from them. It is a _____.
(A) Saprotroph (B) Parasite
(C) Autotroph (D) Insectivore
13. In human beings, digestion of food is completed and absorbed mainly in the _____.
(A) Stomach (B) Large intestine
(C) Small intestine (D) Oesophagus
14. The transfer of heat through a solid, without the solid itself moving, is called _____.
(A) Reflection (B) Convection
(C) Radiation (D) Conduction
15. Heat from the sun reaches the earth by _____.
(A) Radiation (B) Convection
(C) Conduction (D) Evaporation
16. Which of these is a **chemical** change?
(A) Melting of wax (B) Souring of milk
(C) Dissolving sugar in water (D) Tearing of paper
17. Substances that taste sour and turn blue litmus red are called _____.
(A) Salts (B) Bases
(C) Acids (D) Indicators
18. The reaction between an acid and a base, giving a salt and water, is called _____.
(A) Oxidation (B) Sublimation
(C) Displacement (D) Neutralisation
19. The acid present in our stomach that helps in digestion is _____.
(A) Hydrochloric acid (B) Sulphuric acid
(C) Nitric acid (D) Citric acid
20. The breakdown of glucose in the presence of oxygen is called _____ respiration.
(A) Anaerobic (B) Aerobic
(C) Artificial (D) Aquatic

21. In human beings, gaseous exchange takes place in tiny air sacs called _____.
(A) Trachea (B) Bronchi
(C) Alveoli (D) Villi
22. The blood vessels that carry blood **away** from the heart are called _____.
(A) Veins (B) Valves
(C) Capillaries (D) Arteries
23. The SI unit of speed is _____.
(A) m/s (B) km/h
(C) m/s² (D) km
24. The image formed by a plane mirror is _____.
(A) Real, inverted and smaller (B) Virtual, erect and of the same size
(C) Real, erect and larger (D) Virtual, inverted and smaller
25. Which mirror is used as a rear-view mirror in vehicles?
(A) Plane (B) Concave
(C) Convex (D) Cylindrical
26. A fuse wire is made of a material with a _____.
(A) High melting point (B) Magnetic property
(C) Very high resistance always (D) Low melting point
27. The day-to-day condition of the atmosphere at a place is called its _____.
(A) Weather (B) Climate
(C) Season (D) Habitat
28. The instrument used to measure rainfall is a _____.
(A) Barometer (B) Rain gauge
(C) Anemometer (D) Hygrometer
29. Which type of soil holds the **most** water?
(A) Sandy soil (B) Loamy soil
(C) Clayey soil (D) Gravel
30. Which of these is a natural indicator?
(A) Universal indicator paper (B) Phenolphthalein
(C) Methyl orange (D) Litmus
31. The lowest temperature at which a substance catches fire is called its _____.
(A) Ignition temperature (B) Boiling point
(C) Melting point (D) Calorific value
32. Which of these correctly describes the direction of blood flow?
(A) Heart → arteries → capillaries → veins → heart (B) Heart → veins → capillaries → arteries → heart
(C) Arteries → heart → veins → capillaries (D) Capillaries → heart → arteries → veins
33. Which of these was **not** a reliable early method of measuring length?
(A) Using the length of a foot (B) Using a standard metre scale
(C) Using the span of a hand (D) Using the length of a forearm

34. Which of these is **not** a condition necessary for combustion?
- (A) A combustible substance (B) A supply of air (oxygen)
(C) The presence of water (D) Attainment of ignition temperature
35. The uppermost layer of soil, dark and rich in humus, is called the _____.
(A) Bedrock (B) Subsoil
(C) Parent rock (D) Topsoil

Section 2 — Science (contd.)

Q36–Q45 · 1 mark each

36. Which vitamin does the body make when the skin is exposed to sunlight?
(A) Vitamin D (B) Vitamin B
(C) Vitamin C (D) Vitamin A
37. The disease caused by a severe shortage of protein in children is _____.
(A) Night blindness (B) Kwashiorkor
(C) Anaemia (D) Scurvy
38. Which of these is a good **insulator** of heat?
(A) Iron (B) Copper
(C) Wood (D) Aluminium
39. A dilute acid reacts with zinc metal to produce _____.
(A) Oxygen gas (B) Nitrogen gas
(C) Carbon dioxide gas (D) Hydrogen gas
40. Which of these is a saprotroph?
(A) Bread mould (B) Green plant
(C) Cuscuta (D) Tiger
41. The pulse felt at the wrist is caused by _____.
(A) Blood flowing back through the veins (B) The rhythmic expansion of an artery each time the heart pumps
(C) Muscles contracting in the arm (D) Air moving through the lungs
42. A magnesium ribbon burns in air with a bright light, leaving a white ash. This is an example of _____.
(A) A physical change (B) Evaporation
(C) A chemical change (D) Sublimation
43. The time taken by a simple pendulum to complete one full oscillation is called its _____.
(A) Amplitude (B) Length
(C) Frequency (D) Time period
44. A cyclone forms over warm seas mainly because of _____.
(A) Warm moist air rising rapidly, creating low pressure (B) Very cold sea water
(C) Dry desert air (D) Complete absence of wind
45. Milk is pasteurised by heating it and then chilling it suddenly. Why?
(A) To make the milk sweeter (B) To kill most microbes without spoiling the taste
(C) To remove all the fat (D) To turn it into curd

46. Consider the following statements.

- (i) Respiration and breathing mean the same thing.
- (ii) Anaerobic respiration releases less energy than aerobic respiration.
- (iii) Plants respire only at night.

Which of the statements is/are correct?

- | | |
|-----------------------|-------------------------|
| (A) (i) only | (B) (ii) only |
| (C) (i) and (ii) only | (D) (ii) and (iii) only |

47. A germinating seed is sealed in a flask with a small tube of lime water. After a day the lime water turns milky and a lit splint put into the flask goes out. What do these show?

- | | |
|---|---------------------------------------|
| (A) The seed is photosynthesising | (B) The seed is dead |
| (C) The seed is respiring, using up oxygen and releasing carbon dioxide | (D) The flask was not sealed properly |

48. A student adds a base drop by drop to a beaker of acid containing phenolphthalein (colourless in acid, pink in base). What happens at the exact point of neutralisation?

- | | |
|----------------------------|---|
| (A) No change ever occurs | (B) The solution turns pink at once from the first drop |
| (C) The solution turns red | (D) The solution stays colourless and one more drop turns it permanently pink |

49. A thermos flask has a double wall with a vacuum between, silvered surfaces and an insulating stopper. Which mode of heat transfer does the vacuum mainly stop?

- | | |
|-------------------------------|--------------------|
| (A) Conduction and convection | (B) Radiation only |
| (C) Radiation and conduction | (D) None of them |

50. Two identical trays of soil are tilted at the same angle. Tray X is bare and tray Y is covered with grass. The run-off from X is muddy and from Y clear. What does this show?

- | | |
|----------------------------------|---|
| (A) Grass makes water dirty | (B) Plant cover reduces soil erosion by running water |
| (C) Bare soil absorbs more water | (D) The angle of slope has no effect |

Answer Key

1	C	2	D	3	A	4	D	5	A
6	B	7	B	8	C	9	C	10	D
11	A	12	B	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	A	33	B	34	C	35	D
36	A	37	B	38	C	39	D	40	A
41	B	42	C	43	D	44	A	45	B
46	B	47	C	48	D	49	A	50	B

Solutions

1. Answer: (C) 162

Each number is multiplied by 3 to get the next: $2 \times 3 = 6$, $6 \times 3 = 18$, $18 \times 3 = 54$, $54 \times 3 = \mathbf{162}$.

2. Answer: (D) Common cold

Malaria (protozoan), typhoid (bacteria) and tuberculosis (bacteria) are not viral diseases. The **common cold** is caused by a virus, so it is the odd one out.

3. Answer: (A) N

Each letter moves back by 3: Z,(Y,X),W,(V,U),T,(S,R),Q,(P,O),**N**.

4. Answer: (D) 6-12-15-23-5-18

Each letter is replaced by its position: F=6,L=12,O=15,W=23,E=5,R=18, giving **6-12-15-23-5-18**.

5. Answer: (A) Mother

The only daughter of the woman's mother is the woman herself, assuming she has no sisters. So the man's mother is the woman herself — the woman is his **mother**.

6. Answer: (B) 22

Total = $9 + 14 - 1 = \mathbf{22}$ students.

7. Answer: (B) 15 km

Distance = $\sqrt{9^2 + 12^2} = \sqrt{81 + 144} = \sqrt{225} = \mathbf{15 \text{ km}}$.

8. Answer: (C) Photosynthesis

Aerobic respiration, anaerobic respiration and fermentation are all ways of releasing energy from food. **Photosynthesis** is the process of making food, so it does not belong with the rest.

9. Answer: (C) 121

The second number is the first squared: $7^2 = 49$. So $11^2 = \mathbf{121}$.

10. Answer: (D) Friday

$24 = 3 \times 7 + 3$, so 3 extra days after Tuesday: Wednesday, Thursday, **Friday**.

11. Answer: (A) Autotrophs

Autotrophs make their own food, as green plants do by photosynthesis.

12. Answer: (B) Parasite

Cuscuta has no chlorophyll and takes ready-made food from the host, so it is a **parasite**.

13. Answer: (C) Small intestine

The **small intestine** completes digestion and absorbs the digested food.

14. Answer: (D) Conduction

Conduction passes heat from particle to particle through a solid.

15. Answer: (A) Radiation

Space is a vacuum, so heat reaches us by **radiation**, which needs no medium.

16. Answer: (B) Souring of milk

Souring of milk forms lactic acid, a new substance, so it is chemical.

17. Answer: (C) Acids

Acids taste sour and turn blue litmus red.

18. Answer: (D) Neutralisation

Neutralisation: acid + base $\rightarrow$ salt + water.

19. Answer: (A) Hydrochloric acid

The stomach secretes **hydrochloric acid**.

- 20. Answer: (B) Aerobic**
Aerobic respiration uses oxygen and releases a great deal of energy.
- 21. Answer: (C) Alveoli**
Alveoli are the tiny air sacs where gas exchange happens.
- 22. Answer: (D) Arteries**
Arteries carry blood away from the heart.
- 23. Answer: (A) m/s**
Speed's SI unit is **m/s**.
- 24. Answer: (B) Virtual, erect and of the same size**
A plane mirror gives a **virtual, erect, same-size** image.
- 25. Answer: (C) Convex**
A **convex** mirror gives a wide field of view.
- 26. Answer: (D) Low melting point**
A fuse wire has a **low melting point**, so it melts and breaks the circuit during overload.
- 27. Answer: (A) Weather**
Weather is the day-to-day state of the atmosphere.
- 28. Answer: (B) Rain gauge**
A **rain gauge** measures rainfall.
- 29. Answer: (C) Clayey soil**
Clayey soil has fine particles that hold water well.
- 30. Answer: (D) Litmus**
Litmus, extracted from lichens, is a natural indicator.
- 31. Answer: (A) Ignition temperature**
The **ignition temperature** is the lowest temperature at which a substance catches fire.
- 32. Answer: (A) Heart → arteries → capillaries → veins → heart**
Blood flows **heart → arteries → capillaries → veins → heart**.
- 33. Answer: (B) Using a standard metre scale**
A **standard metre scale** was reliable; body parts vary from person to person.
- 34. Answer: (C) The presence of water**
Water is not needed for combustion; it is often used to put fires out.
- 35. Answer: (D) Topsoil**
The **topsoil** is dark and fertile, rich in humus.
- 36. Answer: (A) Vitamin D**
Sunlight lets the body make **vitamin D**.
- 37. Answer: (B) Kwashiorkor**
Kwashiorkor is caused by a severe lack of protein.
- 38. Answer: (C) Wood**
Wood is a poor conductor, so it insulates against heat.
- 39. Answer: (D) Hydrogen gas**
An acid reacting with a reactive metal like zinc produces **hydrogen gas**.
- 40. Answer: (A) Bread mould**
Bread mould feeds on dead organic matter, making it a saprotroph.

- 41. Answer: (B)** The rhythmic expansion of an artery each time the heart pumps
The pulse is caused by **the rhythmic expansion of an artery** with each heartbeat.
- 42. Answer: (C)** A chemical change
A new substance (magnesium oxide) forms, so this is a **chemical** change.
- 43. Answer: (D)** Time period
The **time period** is the time for one complete swing.
- 44. Answer: (A)** Warm moist air rising rapidly, creating low pressure
A cyclone forms when **warm moist air rises rapidly, creating a region of low pressure**.
- 45. Answer: (B)** To kill most microbes without spoiling the taste
Pasteurisation **kills most microbes without spoiling the taste**, keeping milk safe longer.
- 46. Answer: (B)** (ii) only
Statement (i) is false — breathing is only taking in and giving out air; respiration releases energy inside cells. Statement (ii) is true. Statement (iii) is false; plants respire day and night. Hence **(ii) only**.
- 47. Answer: (C)** The seed is respiring, using up oxygen and releasing carbon dioxide
Milky lime water shows carbon dioxide was produced; the splint going out shows oxygen was used up — together proving **the seed is respiring**.
- 48. Answer: (D)** The solution stays colourless and one more drop turns it permanently pink
While acid remains, the indicator stays colourless. At neutrality, **one further drop of base makes it permanently pink**, marking the end point.
- 49. Answer: (A)** Conduction and convection
A vacuum has no particles, so it blocks **conduction and convection**.
- 50. Answer: (B)** Plant cover reduces soil erosion by running water
The only difference is the grass cover, so **plant cover reduces soil erosion by running water**.