

CLASS 8 - SCIENCE | SOF ISO-STYLE LEVEL 1

50 MCQs | Maximum Marks: 60 | Time: 60 minutes

Name: _____ Batch: _____ Date: _____

Choose one correct option. Q1-45: 1 mark each; Q46-50: 3 marks each. No negative marking.

All questions are compulsory. No calculators. Original Prodigy practice paper; not an official SOF paper.

LOGICAL REASONING

- Find the next number: 2, 5, 8, 11, ...
(A) 15 (B) 12 (C) 14 (D) 13
- If CAT is coded as DBU by shifting each letter one step forward, DOG is coded as:
(A) FPI (B) EPH (C) CNE (D) EOG
- Which is the odd one out?
(A) Square (B) Triangle (C) Rectangle (D) Sphere
- A student faces north, turns right, then right again. Which way does the student face?
(A) South (B) East (C) North (D) West
- Complete the analogy: Hand : Glove :: Foot : ?
(A) Sock (B) Belt (C) Shirt (D) Hat
- In a row of 25 students, Mira is 8th from the left. Her position from the right is:
(A) 19th (B) 16th (C) 18th (D) 17th
- Find the next letters: AB, DE, GH, JK, ...
(A) OP (B) MN (C) NO (D) LM
- P is Q's brother. Q is R's mother. P is R's:
(A) Son (B) Father (C) Maternal uncle (D) Grandfather
- Select the next shape in the repeating pattern: ○, △, □, ○, △, □, ○, △, ...
(A) ○ (B) △ (C) □ (D) ◇
- All roses are flowers. Some flowers are white. Which conclusion must follow?
(A) All white things are roses (B) All roses are flowers
(C) No rose is white (D) All roses are white

SCIENCE

- The green pigment chiefly involved in photosynthesis is:
(A) Keratin (B) Chlorophyll (C) Haemoglobin (D) Melanin
- In humans, most digested food is absorbed in the:
(A) Large intestine (B) Small intestine (C) Stomach (D) Oesophagus

- A solution turning blue litmus red is:
(A) Always neutral (B) Acidic (C) Always pure water (D) Basic
- An acid reacts with a base to form, generally:
(A) Salt and water (B) Only carbon dioxide (C) Hydrogen and oxygen (D) Only a metal
- Heat transfer through a metal spoon is chiefly:
(A) Convection (B) Conduction (C) Sublimation (D) Evaporation
- The SI unit of temperature is:
(A) joule (B) watt (C) kelvin (D) degree Celsius
- Water vapour changing into liquid water is:
(A) Sublimation (B) Melting (C) Condensation (D) Freezing
- The SI unit of speed is:
(A) m/s (B) m²/s (C) m/s² (D) kg/m³
- A car travels 120 km in 3 h. Its average speed is:
(A) 60 km/h (B) 360 km/h (C) 40 km/h (D) 30 km/h
- Which circuit component opens or closes a conducting path?
(A) Bulb glass (B) Plastic cover (C) Switch (D) Insulator alone
- The image in a plane mirror is:
(A) Real and inverted (B) Virtual and erect (C) Always smaller (D) Real and erect
- Kidneys primarily remove nitrogenous wastes from:
(A) Saliva (B) Food in the stomach (C) Blood (D) Air in the lungs
- Asexual reproduction in yeast commonly occurs by:
(A) Egg laying (B) Pollination (C) Seed formation (D) Budding
- Wind moves mainly from a region of:
(A) Lower pressure to higher pressure (B) Darkness to light (C) Lower humidity to higher humidity only (D) Higher pressure to lower pressure
- A fair experiment changes one factor while keeping relevant other factors:
(A) Randomly increased (B) Unmeasured always (C) Absent (D) Controlled

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26. Which instrument is most suitable for observing individual bacteria?

- (A) Spring balance (B) Telescope (C) Microscope (D) Barometer

27. Antibiotics are generally used against bacterial infections, not against:

- (A) Viruses (B) Susceptible bacteria (C) All microorganisms equally (D) Many bacterial pathogens

28. Washing hands before eating primarily helps prevent:

- (A) Loss of oxygen (B) Transmission of pathogens (C) Melting of food (D) Changes in Earth's gravity

29. Vaccination mainly prepares the body's:

- (A) Bones to lengthen (B) Blood to stop flowing (C) Immune response (D) Digestive enzymes only

30. Diffusion provides evidence that particles of matter:

- (A) Exist only in solids (B) Never move (C) Have no mass (D) Move continuously

31. A gas is easily compressed mainly because its particles have:

- (A) No motion (B) No volume as particles (C) No mass (D) Large spaces between them

32. Which is a compound?

- (A) Iron (B) Water (C) Oxygen (D) Copper

33. Which is a mixture?

- (A) Pure carbon dioxide (B) Air (C) Pure sodium chloride (D) Pure distilled water

34. A solute is the substance that:

- (A) Dissolves in a solvent (B) Always settles immediately (C) Never forms a solution (D) Is always a liquid

35. Salt dissolved in water can be recovered most directly by:

- (A) Evaporation (B) Sieving (C) Using a magnet (D) Handpicking

36. A saturated solution at a fixed temperature:

- (A) Contains no solute (B) Is always colourless (C) Is always a suspension (D) Cannot dissolve more of that solute

37. A push or pull that can change motion is called:

- (A) Temperature (B) Density (C) Volume (D) Force

38. A force of 20 N acts normally over 0.5 m². Pressure is:

- (A) 40 Pa (B) 20 Pa (C) 0.025 Pa (D) 10 Pa

39. Pressure in a liquid increases with:

- (A) Depth below the surface (B) Container colour (C) Decreasing depth only (D) Height above the surface only

40. An electromagnet can be made stronger by:

- (A) Reducing current to zero (B) Using no conducting wire (C) Increasing turns in its coil at the same current (D) Removing its coil

41. An electric heater chiefly uses the current's:

- (A) Gravitational effect (B) Heating effect (C) Photosynthetic effect (D) Cooling effect

42. A convex lens can converge a parallel beam because it:

- (A) Makes light travel without direction (B) Stops all light (C) Refracts light towards the principal axis (D) Reflects every ray backwards

43. A concave mirror can give an enlarged, erect image when the object lies:

- (A) Between pole and focus (B) Beyond the centre of curvature (C) At the centre of curvature (D) At infinity

44. In a food chain grass → deer → tiger, the producer is:

- (A) Deer (B) Tiger (C) All three equally (D) Grass

45. The apparent daily movement of stars across the sky is primarily due to Earth's:

- (A) Revolution around the Moon (B) Changing mass (C) Rotation (D) Ocean tides

ACHIEVERS SECTION (3 MARKS EACH)

46. Two identical shallow dishes contain equal water volumes. One is in still air; the other is under a fan. Temperature is the same. The fan dish loses water faster mainly because:

- (A) Water particles stop moving (B) Moving air removes water vapour above the surface (C) The fan changes water into a new element (D) The fan reduces exposed area

47. Four forces act horizontally: 8 N east, 3 N west, 6 N east and 5 N west. The net force is:

- (A) 8 N west (B) 14 N east (C) 6 N west (D) 6 N east

48. At a fixed temperature, 100 g water dissolves at most 36 g salt. If 50 g salt is stirred into 100 g water, what is left undissolved?

- (A) 50 g (B) 14 g (C) 36 g (D) 86 g

49. Two coils have equal turns and identical iron cores. Coil P carries 1 A and Q carries 2 A. Both are otherwise identical. Which statement is correct?

- (A) Both have zero magnetic effect (B) Q is the stronger electromagnet (C) P is stronger (D) Current cannot affect strength

50. A student adds sugar to water and claims it vanished because the liquid level barely changes. Which pair of observations best disproves this claim?

- (A) No colour change and transparent glass (B) No bubbles and unchanged room temperature (C) Sweet taste and sugar recovered after evaporation (D) No sound and a clean spoon