NSMC 2026 · QUESTION PAPER

National Science and Math Championship

NSMC 2026 — Where Curiosity meets Competition

XandY LEARNING | Conducted by **XandY Learning**

GRADE 06

GRADE	TOTAL QUESTIONS	MAXIMUM MARKS	MARKING SCHEME
06	40 MCQs	160	+4 / −1

GENERAL INSTRUCTIONS

1. This question paper contains 40 multiple-choice questions.
2. Each correct answer carries 4 marks.
3. One mark will be deducted for every incorrect answer.
4. Choose the most appropriate answer from the four options.

PAPER PATTERN

SEC.	SUBJECT	Q. NO.	QS	MARKS
A	Mental Ability	1–8	8	32
B	Science	9–24	16	64
C	Mathematics	25–40	16	64
	Total	**1–40**	**40**	**160**

SECTION A — Mental Ability

Questions 1–8 · 8 × 4 = 32 marks

1. In a code language, '582' means 'eat fresh fruits', '263' means 'fruits are sweet' and '731' means 'sweet and juicy'. Which digit stands for 'are'?

A) 2 **B)** 3 **C)** 6 **D)** 8

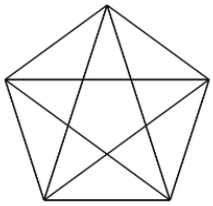
2. Which word looks exactly the same in its water image?

A) BOX **B)** TOP **C)** MAP **D)** SUN

3. Tiger : Stripes :: Leopard : ?

A) Mane **B)** Spots **C)** Horns **D)** Tail

4. How many triangles are there in the figure?



A) 30 **B)** 35 **C)** 25 **D)** 40

5. Find the odd one out.

A) 13 **B)** 17 **C)** 21 **D)** 29

6. A, D, H, M, S, ___

A) X **B)** Y **C)** Z **D)** W

7. If each letter of the word MARKET is replaced by the next letter in the English alphabet, which letter will be third from the right in the new word?

A) L **B)** M **C)** S **D)** F

8. A school is located 6 km East of a park. A hospital is located 4 km North of the school. In which direction is the hospital from the park?

A) North-West **B)** South-East **C)** North-East **D)** South-West

SECTION B — Science

Questions 9–24 · 16 × 4 = 64 marks

9. Two identical-looking steel bars, P and Q, are given. One is a magnet and the other is plain iron. When the end of P is touched to the middle of Q, they attract. When the end of Q is touched to the middle of P, there is no attraction. What can you conclude?

A) Q is the magnet and P is plain iron
B) P is the magnet and Q is plain iron
C) Both P and Q are magnets
D) Both P and Q are plain iron

10. A chain of three soft iron nails hangs end to end from the north pole of a bar magnet. What is the polarity of the free lower end of the last nail, and what happens to the nails when the magnet is pulled away?

A) South pole; the nails stay strongly magnetised
B) South pole; the nails lose most of their magnetism
C) North pole; the nails lose most of their magnetism
D) North pole; the nails stay strongly magnetised

11. A child's temperature is measured as 311 K. A clinical thermometer has a scale from 35°C to 42°C. What is the reading in °C, and how does it compare with the normal body temperature of 37°C?

A) 584°C, off the scale
B) 36°C, 1°C below normal
C) 38°C, off the scale
D) 38°C, 1°C above normal

12. Three rods X, Y and Z, of the same size and different metals, are each fitted with a pin stuck on with wax at an equal distance from one end. All three are heated at that end together. The pins fall in the order Y, then Z, then X. Three pans are to be made from these metals, one for the handle and one for the base. Which choice is best?

A) Handle from X, base from Y
B) Handle from Y, base from X
C) Handle from Z, base from Y
D) Handle from X, base from Z

13. Which of the following show only rotational motion?

I. The Earth, considering only day and night
II. A spinning top at one spot on the table
III. The Earth, considering only the change of seasons
IV. The blades of a ceiling fan

A) I and III only **B)** II and III only **C)** I, II, III and IV **D)** I, II and IV only

14. **Assertion:** A wheel rolling along a straight road shows only rotational motion.
Reason: Every point on a rolling wheel stays at a fixed distance from the axle.

A) Both Assertion and Reason are true, and the Reason is the correct explanation of the Assertion
B) Both Assertion and Reason are true, but the Reason is NOT the correct explanation of the Assertion
C) Assertion is true, but Reason is false
D) Assertion is false, but Reason is true

15. Match each mixture in Column A with the property that makes its separation possible in Column B.

Column A	Column B
P. Salt and sand	1. One part is much lighter and is carried away by the wind
Q. Husk and wheat grains	2. The parts have very different particle sizes
R. Iron pins and sawdust	3. One part dissolves in water and the other does not
S. Flour and bran	4. One part is attracted by a magnet
	5. The parts have different colours

A) P-3, Q-2, R-4, S-1 **B)** P-2, Q-1, R-4, S-3 **C)** P-3, Q-1, R-4, S-2 **D)** P-3, Q-5, R-4, S-2

16. Read the statements:

(i) Tap water is a pure substance.
(ii) Distilled water is a pure substance.
(iii) Air is a mixture.
(iv) Milk is a pure substance.

Which statements are correct?

A) (i) and (ii) only **B)** (ii) and (iii) only
C) (iii) and (iv) only **D)** (i), (ii) and (iii) only

17. Three tilted trays are filled with soil: P has bare soil, Q has soil covered with grass, and R has soil covered with a concrete slab. The same amount of water is poured on each. Which tray will have the most water running off its lower end, and which the least?

A) Most: P; least: R **B)** Most: R; least: P **C)** Most: Q; least: R **D)** Most: R; least: Q

18. An astronaut who returned to Earth in March 2025, after an unexpected stay on the International Space Station, inaugurated the 9th Kerala Literature Festival at Kozhikode in January 2026. Who is this astronaut?

A) Butch Wilmore **B)** Sunita Williams **C)** Christina Koch **D)** Kalpana Chawla

19. A child has a swollen belly, weak muscles, fatigue and slow growth. Which food choice would be best to correct the deficiency?

A) Butter, ghee and oil **B)** Sugar, sweets and cold drinks
C) Rice, potato and bread **D)** Milk, eggs, lentils and fish

20. Match the following:

Column I	Column II
A. Night blindness	1. Vitamin C
B. Scurvy	2. Vitamin A
C. Rickets	3. Iodine
D. Goitre	4. Vitamin D

A) A-3, B-2, C-1, D-4 **B)** A-1, B-2, C-4, D-3 **C)** A-2, B-1, C-4, D-3 **D)** A-1, B-2, C-3, D-4

21. Plant P has a weak stem and climbs a support using tendrils. Plant Q has a weak, fragile stem that spreads along the ground. Which row correctly names P and Q?

A) P: Watermelon; Q: Grapevine **B)** P: Pea plant; Q: Tulasi
C) P: Grapevine; Q: Watermelon **D)** P: Rose; Q: Pumpkin

22. Consider the statements:

I. Raspberry is an aggregate fruit formed from many ovaries of a single flower.
II. Pineapple is a multiple fruit formed from a cluster of flowers.
III. A true fruit develops only from the mature ovary.
IV. Apple is a true fruit.

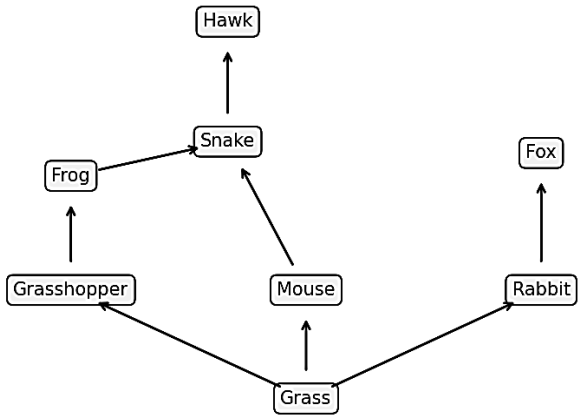
Which statements are correct?

A) II, III and IV only **B)** I, II and III only **C)** I, III and IV only **D)** I, II and IV only

23. **Assertion (A):** Plants are commonly at the first trophic level in a food chain.
Reason (R): Plants make their own food by photosynthesis.

A) Both Assertion (A) and Reason (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

24. In the food web shown, which group contains only animals that can be secondary consumers?



A) Hawk and grass **B)** Frog, snake and fox
C) Grass, mouse and fox **D)** Grasshopper, mouse and rabbit

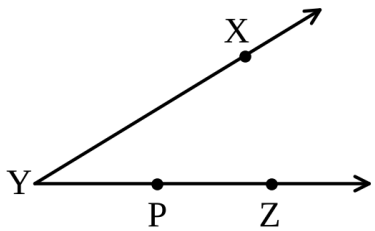
SECTION C Mathematics

Questions 25–40 · 16 × 4 = 64 marks

25. Select the correct match.

A) A parallelogram with equal sides – Rhombus
B) A kite is – Quadrilateral
C) An angle lying between 180° and 360° – Reflex angle
D) All are correct

26. In the given figure, ∠XYZ cannot be written as:

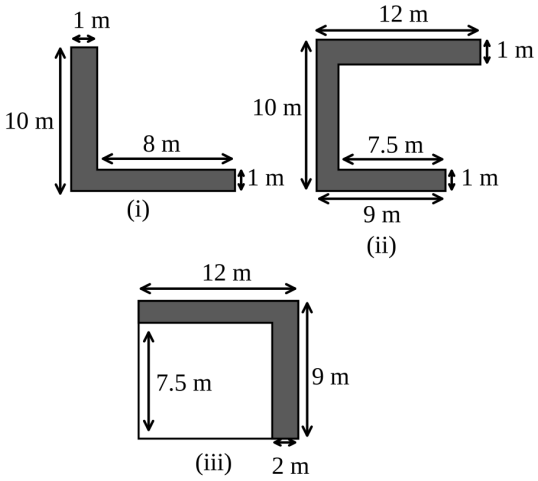


A) ∠Y **B)** ∠XY **C)** ∠ZYX **D)** ∠XYP

27. A room is 4 m long and 3 m 50 cm wide. How many square tiles of side 50 cm are needed to cover the floor of the room completely?

A) 14 **B)** 28 **C)** 56 **D)** 112

28. Which of the following has the maximum shaded area?



A) [i] **B)** [ii] **C)** [iii] **D)** Both [ii] and [iii]

29. Using tally marks, which one of the following represents the number eight?

A)  **B)**  **C)**  **D)** 

30. The number of times an observation occurs in the data is called its:

A) Frequency **B)** Interval **C)** Raw data **D)** Mode

31. 8888 m in km can be written as:

A) 8.888 km **B)** 888.8 km **C)** 88.88 km **D)** None of these

32. Which number is equal to $\left(\frac{0.1}{0.01}+\frac{0.01}{0.1}\right)$?

A) 10.1 **B)** 1.10 **C)** 1.01 **D)** 10.01

33. In a class A of 25 students, 20 passed in first class, in another class B of 30 students, 24 passed in first class. In which class was a greater fraction of students getting first class?

A) Class A **B)** Class B
C) Both classes have an equal fraction **D)** None of these

34. Ila reads 25 pages of a book containing 100 pages. Lalita reads $\frac{2}{5}$ of the same book. Who read less?

A) Both **B)** Ila **C)** Lalita **D)** None of these

35. Which of the following statements is false?

A) 1 lies to the right of 0 **B)** 1 lies to the right of −1
C) −2 lies to the left of −1 **D)** 0 lies to the left of −1

36. Which of the following sets of numbers forms a pattern?

A) −6, −3, 0, 3 **B)** 1, 2, 4, 6 **C)** −5, −3, −2, 0 **D)** 0, 2, 3, 4

37. The length, breadth and height of a room are 825 cm, 675 cm and 450 cm respectively. Find the longest tape which can measure the three dimensions of the room exactly.

A) 85 cm **B)** 75 cm **C)** 65 cm **D)** 95 cm

38. The sum of a natural number and a whole number is always:

A) 0 **B)** 100

C) Even number **D)** A natural number

39. Which of the following expressions shows the prime factorization of the number?

A) 24 = 2 × 3 × 4 **B)** 56 = 7 × 8 **C)** 70 = 2 × 5 × 7 **D)** 54 = 2 × 3 × 9

40. Rama's date of birth is 29th October. Express the date in Roman numerals.

A) XXX **B)** XXIX **C)** XXXI **D)** XXV

END OF QUESTION PAPER