NSMC 2026 · QUESTION PAPER

National Science and Math Championship

Where Curiosity meets Competition

Conducted by XandY Learning

GRADE 05

GRADE	TOTAL QUESTIONS	MAXIMUM MARKS	MARKING SCHEME
05	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. If CAT = 24, then DOG = ?

A) 24 **B)** 25 **C)** 26 **D)** 27

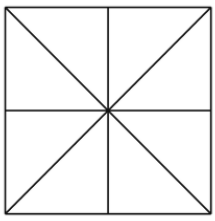
2. Which of these letters looks exactly the same in a mirror?

A) B **B)** F **C)** A **D)** R

3. Cow : Calf :: Dog : ?

A) Kitten **B)** Lamb **C)** Cub **D)** Puppy

4. How many triangles are there in the figure?



A) 8 **B)** 12 **C)** 16 **D)** 20

5. One morning, Anu is standing facing the rising Sun. She turns left, then turns right twice. Which direction is she facing?

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

6. Find the odd one out.

A) Kerala **B)** Chennai **C)** Goa **D)** Punjab

7. 100, 96, 88, 76, 60, ___

A) 44 **B)** 42 **C)** 40 **D)** 36

8. If the following words are arranged according to dictionary order, which word will occupy the middle position?

ALGORITHM, ALGEBRA, ALIGN, ALIEN, ALIVE

A) ALIGN **B)** ALGORITHM **C)** ALIVE **D)** ALIEN

SECTION B Science

Questions 9–24 · 16 × 4 = 64 marks

9. Arjun uses a magnetic compass. The needle shows north, and it is on his right-hand side. Which direction is Arjun facing?

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

10. At 7 a.m., Riya stands in an open ground with her back to the Sun. She turns 90° clockwise, then turns 180°, and finally turns 90° anticlockwise. Which direction does her right hand point to now?

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

11. Why is a total solar eclipse seen only in a narrow strip of Earth, while a lunar eclipse is seen by everyone on the night side?

A) The Moon's shadow on Earth is small

B) The Sun is blocked only for some countries

C) Solar eclipses happen only near the poles

D) Earth's shadow is smaller than the Moon's

12. Why does the Pole Star seem to stay in one place at night while other stars appear to move across the sky?

A) It lies almost along Earth's axis line **B)** It does not move at all in space

C) It is the nearest star to Earth **D)** It is the brightest star in the sky

13. Read the four statements about India's space journey. Which statement is NOT correct?

I. Chandrayaan-3's lander touched down near the Moon's south polar region in 2023.

II. Aditya-L1 was sent to study the Sun and is placed about 1.5 million km from Earth, towards the Sun.

III. The Mars Orbiter Mission (Mangalyaan) reached Mars orbit in its very first attempt in 2014.

IV. India's first satellite, Aryabhata, was launched in 1975 using a rocket built by ISRO.

A) I **B)** II **C)** III **D)** IV

14. Which of the following is the most abundant state of matter found in the universe?

A) Solid **B)** Liquid **C)** Gas **D)** Plasma

15. In which of the following pairs of water-cycle processes is heat given out in both cases?

A) Evaporation and condensation **B)** Melting and freezing

C) Condensation and freezing **D)** Melting and condensation

16. A sealed syringe of gas is pressed hard and cooled until all the gas turns into liquid.

(i) Pressing pushes the gas particles closer together.

(ii) Cooling helps the gas turn into a liquid.

(iii) After the gas becomes a liquid, the piston can still be pushed in easily.

Which of the above statements are correct?

A) (i) only **B)** (i) and (ii) only **C)** (ii) and (iii) only **D)** All three

17. _____ is an example of a depletable renewable form of energy.

A) Biomass **B)** Biogas **C)** Geothermal **D)** Hydropower

18. Read the statements:

(i) All fossil fuels are non-renewable.

(ii) Solar energy is renewable because the Sun does not run out when we use its energy.

(iii) Wind is caused indirectly by the Sun.

Which statements are correct?

A) (i) only **B)** (i) and (ii) only **C)** (ii) and (iii) only **D)** All three

19. **Assertion (A):** Fossil fuels are non-renewable, even though their energy originally came from the Sun.

Reason (R): The plants that formed fossil fuels captured the Sun's energy millions of years ago.

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.

20. Read the statements:

I. Wind-pollinated flowers have light and powdery pollen grains.

II. Bright and scented flowers attract insects.

III. Artificial pollination is carried out by humans.

IV. Self-pollination requires the help of pollinators.

Which are the correct statements?

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

21. In a forest, deer eat plants, wolves eat deer, and bears eat both deer and plants. If the wolf population falls because of hunting, what is most likely to happen first?

A) The deer population will decrease **B)** The bear population will decrease

C) The plant population will increase **D)** The deer population will increase

22. Match the following:

Column I	Column II
A. Simple fruit	1. Strawberry
B. Multiple fruit	2. Apple
C. Aggregate fruit	3. Avocado
D. False fruit	4. Jackfruit

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

23. **Assertion (A):** Tertiary consumers are found at the top of most food chains.

Reason (R): Energy transfer in a food chain is efficient, and the amount of energy increases at higher trophic levels.

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. A student observes a fish in a pond, a cactus in a desert, a mushroom on a damp log, and a butterfly in a garden. Which statement best explains the diversity seen in these organisms?

A) All organisms live in similar habitats and obtain food in similar ways.

B) Different organisms have different adaptations for surviving in different habitats.

C) Only plants show diversity because animals have similar needs and characteristics.

D) Organisms living in different habitats cannot share any common characteristics.

SECTION C — Mathematics

Questions 25–40 · 16 × 4 = 64 marks

25. The diameter of a circle is 18 cm. What is its radius?

A) 36 cm **B)** 18 cm **C)** 9 cm **D)** 6 cm

26. Some points are marked on a circle. Every point is joined to every other point by a line segment, and 21 line segments are formed in all. How many points are marked on the circle?

A) 6 **B)** 7 **C)** 8 **D)** 21

27. What is the place value of 7 in the number 47382?

A) 7 **B)** 700 **C)** 70000 **D)** 7000

28. Using each of the digits 3, 0, 7 and 5 exactly once, find the difference between the largest and the smallest 4-digit numbers that can be formed.

A) 4473 **B)** 7173 **C)** 4437 **D)** 4527

29. Find the next term: 1, 2, 6, 15, 31, ___

A) 47 **B)** 52 **C)** 56 **D)** 63

30. Which of the following numbers is NOT in the multiplication table of 15?

A) 45 **B)** 75 **C)** 105 **D)** 95

31. A cinema hall has 28 rows with 36 seats in each row. For one show, 45 seats were empty. How many people watched the show?

A) 963 **B)** 973 **C)** 1008 **D)** 1053

32. 368 students are going on a school trip. Each bus can carry 45 students. What is the least number of buses needed so that every student gets a seat?

A) 7 **B)** 8 **C)** 9 **D)** 10

33. What is the smallest number that must be added to 500 so that the sum is exactly divisible by 12?

A) 2 **B)** 4 **C)** 8 **D)** 12

34. A pizza is cut into 8 equal slices. Rohan eats 3 slices. What fraction of the pizza is left?

A) $\frac{5}{8}$ **B)** $\frac{3}{8}$ **C)** $\frac{3}{5}$ **D)** $\frac{5}{3}$

35. There are 36 students in a class. One quarter of them like cricket, one third like football and the rest like hockey. How many students like hockey?

A) 9 **B)** 12 **C)** 21 **D)** 15

36. A train leaves a station at 21:45 and reaches its destination at 05:20 the next morning. How long is the journey?

A) 7 hours 25 minutes **B)** 7 hours 35 minutes
C) 8 hours 35 minutes **D)** 16 hours 25 minutes

37. Which of the following is the longest period of time?

A) 200 minutes **B)** 3 hours 15 minutes
C) 11400 seconds **D)** $\frac{1}{8}$ of a day

38. A school day starts at 8:00 a.m. and ends at 13:30. It has 6 periods of equal length, one lunch break of 20 minutes and one short break of 10 minutes. How long is each period?

A) 45 minutes **B)** 50 minutes **C)** 55 minutes **D)** 60 minutes

39. How many days are there from 18th March to 9th May of the same year, both days included?

A) 51 **B)** 52 **C)** 54 **D)** 53

40. 26th January 2028 is a Wednesday. What day of the week will 1st March 2028 be?

A) Tuesday **B)** Thursday **C)** Wednesday **D)** Friday

END OF QUESTION PAPER