

YOUNG GENIUS EXAM 2026

Sample Practice Paper — Class X

For practice only. These are NOT the questions that will appear in the examination.

WHAT THIS PAPER IS FOR

The Young Genius Exam has 100 questions in 120 minutes. This sample paper has 40 questions and should take you about 45 minutes. Every question here is new — none of them will appear in the real examination. The purpose is to show you the pattern, the types of questions and the level of difficulty, so that nothing on 27 September comes as a surprise.

Answers with explanations are given at the end. Attempt the whole paper first, then check.

THE REAL EXAMINATION — PATTERN

Section	Questions in the real exam	Questions in this sample
PART A — Scholastic Aptitude (what you have learnt)	60	20
Mathematics	16	6
Physics	12	4
Chemistry	12	4
Biology	12	4
English	8	2
PART B — General Aptitude (how you think)	40	20
Logical & Analytical Reasoning	10	5
Numerical Ability & Data Interpretation	8	4
Spatial & Visual Reasoning	8	5
Verbal Reasoning	8	4
General Knowledge	6	2
TOTAL	100	40

Note: Part B is a bigger share of this sample paper than of the real examination. That is deliberate — most students have never seen reasoning and spatial questions before, so they need the most practice.

IMPORTANT POINTS

- Every question has four options and exactly one correct answer.
- Each question carries 1 mark. THERE IS NO NEGATIVE MARKING, so never leave a question blank — if you are unsure, eliminate what you can and choose.
- The real paper will be given in three versions (A, B and C). All three have the same questions in a different order, so your neighbour's paper will not match yours.
- The real paper covers Class IX topics and the Class X topics taught up to September. Questions are set on what is common to both the CBSE and Kerala State syllabi.
- The real paper will be available in English and in Malayalam.
- Answers are marked on an OMR sheet using a blue or black ball-point pen. Fill the bubble completely.
- Before the exam starts you will be given a short Career Interest Profiler of 20 questions. It is NOT marked and does not affect your rank or scholarship in any way. It is used only to prepare your career guidance report, so answer it honestly.

SAMPLE QUESTIONS

PART A — SCHOLASTIC APTITUDE

MATHEMATICS

- The value of $(2^3 \times 2^5) \div 2^6$ is
 - 2
 - 8
 - 4
 - 16
- If $x + 1/x = 3$, then $x^2 + 1/x^2$ equals
 - 5
 - 9
 - 11
 - 7
- The lines $x = 3$ and $y = -2$ meet at the point
 - $(-2, 3)$
 - $(0, 3)$
 - $(3, -2)$
 - $(3, 0)$
- In an arithmetic sequence the 3rd term is 12 and the 7th term is 28. The common difference is
 - 3
 - 5
 - 6
 - 4
- If one root of $x^2 - 7x + k = 0$ is 3, then the value of k is
 - 10
 - 14
 - 12
 - 21
- The value of $(\sin 60^\circ \times \cos 30^\circ) + (\cos 60^\circ \times \sin 30^\circ)$ is
 - 0
 - $1/2$
 - $\sqrt{3}/2$
 - 1

PHYSICS

- A train moving at 20 m/s is brought uniformly to rest in 10 seconds. Its retardation is
 - 1 m/s^2
 - 4 m/s^2
 - 200 m/s^2
 - 2 m/s^2
- The SI unit of force is the
 - newton
 - joule
 - watt
 - pascal
- A boy of mass 40 kg climbs a staircase of height 3 m. The work done against gravity is (take $g = 10 \text{ m/s}^2$)
 - 1200 J
 - 120 J
 - 400 J
 - 12000 J
- An object is placed in front of a plane mirror. The image formed is
 - real, inverted and of the same size
 - real, erect and magnified
 - virtual, inverted and diminished
 - virtual, erect and of the same size

CHEMISTRY

- Which of the following is a compound?
 - Air
 - Brass
 - Sea water
 - Water
- An atom has 11 protons and 12 neutrons. Its mass number is
 - 11
 - 12
 - 23
 - 34
- The mass of 0.5 mole of carbon dioxide is ($C = 12, O = 16$)
 - 22 g
 - 11 g
 - 44 g
 - 88 g
- A solution turns blue litmus paper red. Its pH is most likely
 - exactly 7
 - more than 7
 - exactly 14
 - less than 7

BIOLOGY

- The control centre of a plant or animal cell is the
 - vacuole
 - nucleus
 - cell wall
 - ribosome
- Which tissue is responsible for the movement of bones?
 - Skeletal muscle
 - Cardiac muscle
 - Smooth muscle
 - Nervous tissue
- Which of these diseases is caused by a virus?
 - Typhoid
 - Dengue
 - Malaria
 - Tuberculosis
- During photosynthesis, the gas taken in by the plant and the gas given out are, in that order,
 - carbon dioxide and oxygen
 - oxygen and carbon dioxide
 - nitrogen and oxygen
 - carbon dioxide and nitrogen

ENGLISH

- Choose the word closest in meaning to RAPID.
 - Slow
 - Heavy
 - Quick
 - Late
- Choose the grammatically correct sentence.
 - She is working here since 2020.
 - She works here since 2020.
 - She has been working here since 2020.
 - She was working here since 2020.

PART B — GENERAL APTITUDE

LOGICAL REASONING

21. Find the next term: 2, 4, 8, 16, ____
 (A) 32
 (B) 20
 (C) 24
 (D) 64
22. If MAT is written as 13-1-20, then CAT is written as
 (A) 3-2-20
 (B) 3-1-20
 (C) 4-1-20
 (D) 3-1-19
23. Ravi says, "This girl is the daughter of my mother's only son." How is the girl related to Ravi?
 (A) Sister
 (B) Daughter
 (C) Niece
 (D) Cousin
24. Find the odd one out.
 (A) Square
 (B) Rectangle
 (C) Cube
 (D) Triangle
25. Five students stand in a queue. E is at the front. C is ahead of D but behind B. A is behind D. Who is second from the front?
 (A) A
 (B) C
 (C) B
 (D) D

NUMERICAL ABILITY

26. If 20% of a number is 45, the number is
 (A) 90
 (B) 225
 (C) 180
 (D) 250
27. An item is marked at ₹800 and sold at a discount of 15%. The selling price is
 (A) ₹680
 (B) ₹640
 (C) ₹720
 (D) ₹760
28. A student scored the following marks, each out of 100: Mathematics 72, Physics 64, Chemistry 58, Biology 86. The average mark is
 (A) 70
 (B) 68
 (C) 72
 (D) 74
29. One tap fills a tank in 6 hours and another fills it in 12 hours. Working together, they fill the tank in
 (A) 3 hours
 (B) 8 hours
 (C) 9 hours
 (D) 4 hours

SPATIAL REASONING

30. How many faces does a triangular prism have?
 (A) 4
 (B) 5
 (C) 6
 (D) 8

31. A square sheet of paper is folded exactly in half once. One small hole is punched through both layers, well away from the fold and from the edges. When the paper is opened out, how many holes are seen?
 (A) 1
 (B) 2
 (C) 3
 (D) 4
32. A square piece of paper is folded once along its diagonal. The shape obtained is a
 (A) rectangle
 (B) trapezium
 (C) triangle
 (D) rhombus
33. You are facing east. You turn 180° , and then turn 90° to your left. Which direction are you facing now?
 (A) North
 (B) South
 (C) East
 (D) West
34. A cube of side 4 cm is painted on all its faces and then cut into 64 small cubes of side 1 cm. How many of the small cubes have no paint on them at all?
 (A) 0
 (B) 24
 (C) 36
 (D) 8

VERBAL REASONING

35. Pen : Write :: Knife : _____
 (A) Sharp
 (B) Kitchen
 (C) Cut
 (D) Metal
36. Find the odd one out.
 (A) Happy
 (B) Angry
 (C) Joyful
 (D) Cheerful
37. The instructions were so _____ that nobody could follow them.
 (A) clear
 (B) simple
 (C) helpful
 (D) confusing
38. "Every student in the class who studies daily scores well. Reena is a student in this class. Reena scores well. So Reena studies daily." This reasoning is weak because
 (A) the statement does not say that daily study is the ONLY way to score well
 (B) Reena may not be in the class
 (C) the size of the class is not given
 (D) the phrase 'studies daily' is not defined

GENERAL KNOWLEDGE

39. Which organisation is responsible for India's space programme?
 (A) ISRO
 (B) DRDO
 (C) BARC
 (D) CSIR

40. Admission to the B.Tech programmes of the National Institutes of Technology (NITs) is mainly through which examination?

- (A) NEET
- (B) JEE Main
- (C) CUET
- (D) KEAM

— END OF SAMPLE QUESTIONS —

Use the space below for rough work.

ANSWERS AND EXPLANATIONS

Attempt the whole paper before you read this page.

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

WHY

1. (C) Add the powers when multiplying and subtract when dividing: $2^{(3+5-6)} = 2^2 = 4$.
2. (D) Square both sides: $(x + 1/x)^2 = x^2 + 2 + 1/x^2 = 9$, so $x^2 + 1/x^2 = 9 - 2 = 7$.
3. (C) On the line $x = 3$ every point has x-coordinate 3; on $y = -2$ every point has y-coordinate -2. The meeting point is (3, -2).
4. (D) There are 4 steps from the 3rd term to the 7th. The total increase is $28 - 12 = 16$, so each step is $16 \div 4 = 4$.
5. (C) A root satisfies the equation. Put $x = 3$: $9 - 21 + k = 0$, so $k = 12$.
6. (D) $(\sqrt{3}/2 \times \sqrt{3}/2) + (1/2 \times 1/2) = 3/4 + 1/4 = 1$. This is also $\sin(60^\circ + 30^\circ) = \sin 90^\circ = 1$.
7. (D) Change in velocity is $0 - 20 = -20$ m/s over 10 s, so the acceleration is -2 m/s². Retardation is 2 m/s².
8. (A) Joule is energy, watt is power and pascal is pressure. Force is measured in newtons.
9. (A) Work against gravity = $mgh = 40 \times 10 \times 3 = 1200$ J.
10. (D) A plane mirror gives a virtual, erect image of exactly the same size as the object, as far behind the mirror as the object is in front of it.
11. (D) Air, brass and sea water are mixtures. Water is a compound: hydrogen and oxygen chemically combined in a fixed ratio.
12. (C) Mass number = protons + neutrons = $11 + 12 = 23$. (The atomic number is 11.)
13. (A) One mole of CO₂ has mass $12 + (2 \times 16) = 44$ g. Half a mole is 22 g.
14. (D) Blue litmus turning red means the solution is acidic, and acids have pH below 7.
15. (B) The nucleus holds the genetic material and directs the activities of the cell.
16. (A) Skeletal (striated) muscle is attached to bones and moves them. Cardiac muscle is found only in the heart and smooth muscle in internal organs.
17. (B) Dengue is viral. Typhoid and tuberculosis are bacterial, and malaria is caused by a protozoan.
18. (A) Plants take in carbon dioxide and release oxygen during photosynthesis. (In respiration it is the other way round.)
19. (C) Rapid means fast, so quick is the closest in meaning.
20. (C) The present perfect continuous - has been working - is used here because the action began in the past and is still going on. 'Since 2020' fixes the starting point.
21. (A) Each term is double the one before it, so the next term is $16 \times 2 = 32$.
22. (B) Each letter is replaced by its position in the alphabet. C = 3, A = 1, T = 20.
23. (B) Ravi's mother's only son is Ravi himself. So the girl is Ravi's daughter.
24. (C) A square, a rectangle and a triangle are flat shapes. A cube is a solid.
25. (C) E is first. B is ahead of C, C ahead of D, D ahead of A, so the order is E, B, C, D, A. The second is B.
26. (B) 20% is one-fifth, so the number is $45 \times 5 = 225$.
27. (A) The discount is 15% of 800 = ₹120, so the selling price is $800 - 120 = ₹680$.
28. (A) Total = $72 + 64 + 58 + 86 = 280$. Average = $280 \div 4 = 70$.
29. (D) In one hour the taps fill $1/6 + 1/12 = 3/12 = 1/4$ of the tank, so the whole tank takes 4 hours.
30. (B) Two triangular faces at the two ends and three side faces joining them: 5 in all.
31. (B) The punch passes through 2 layers, so opening the sheet shows 2 holes.
32. (C) Folding along a diagonal brings one half onto the other, leaving a right-angled triangle.
33. (B) Facing east, a 180° turn makes you face west. From west, your left hand points south, so turning 90° left makes you face south.
34. (D) Only the cubes fully inside are unpainted. Removing one layer from each side leaves a $2 \times 2 \times 2$ block, which is 8 cubes.
35. (C) A pen is used to write, so a knife is used to cut. The link is tool and its use.
36. (B) Happy, joyful and cheerful all mean roughly the same thing. Angry does not.
37. (D) 'Confusing' explains why nobody could follow the instructions. Clear, simple and helpful instructions would be easy to follow, so those three contradict the sentence.
38. (A) The first sentence says daily study leads to good marks. It does not say nothing else does. Reena could be scoring well for another reason.
39. (A) ISRO, the Indian Space Research Organisation.
40. (B) JEE Main ranks are used for B.Tech admission to the NITs. NEET-UG is for medical courses, CUET for central university degree courses, and the KEAM examination is for Kerala's engineering and pharmacy seats.

HOW TO USE THE LAST FEW DAYS

1. Do not try to learn new topics now.

There is not enough time for that, and it will only make you anxious. The paper mostly covers Class IX, which you finished last year. Revise what you already know instead of starting something new.

2. Revise these Class IX topics first.

Mathematics: number systems, polynomials, linear equations, coordinate geometry, mensuration, statistics. Physics: motion, force, gravitation, work and energy, sound. Chemistry: matter, atomic structure, atoms and molecules. Biology: cell, tissues, diseases, natural resources.

3. From Class X, revise only what your school has already taught.

The paper is set on topics common to both the CBSE and Kerala State syllabi, and most of it is Class IX. Schools move at different speeds, so if a Class X chapter is unfamiliar, revise the Class IX topic it is built on rather than trying to learn the new chapter now.

4. Spend the most time on Part B.

Reasoning, numerical ability and spatial questions are the ones most students have never seen. They are also the ones that improve fastest with practice, because the same question types keep coming back. Twenty minutes a day on the types in this paper is usually time well spent. Beyond that, put your time wherever this sample paper showed you are weakest.

5. Practise the spatial questions especially.

Cube cutting, paper folding, nets and direction questions look difficult the first time and become easy the third time. Draw them out on paper. If you cannot picture it, build it with a piece of paper or a matchbox.

6. Attempt every question in the real exam.

There is no negative marking. A blank answer scores zero and so does a wrong one, so a guess can only help you. If you can rule out two options, your chance becomes one in two.

7. Watch the clock.

100 questions in 120 minutes is a little over a minute each. If a question is taking too long, mark your best guess, move on, and come back if there is time.

8. Answer the Interest Profiler honestly.

It is not marked. It is used to work out which career directions suit you, and it only helps you if your answers are true. There is no impressive answer and no correct answer.

9. Sleep properly the night before.

This paper measures how you think, and thinking is the first thing to suffer when you are tired. A rested student scores better than a student who stayed up revising.

All the best.

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