

CADET COLLEGE PETARO

CLASS O-I

Syllabus Outline for MATHEMATICS Paper

CHAPTER # 1

ALGEBRA

- 1 Simplifying and evaluating Algebraic Expressions
 - 2 Solving Word Problems
- Review 1

CHAPTER # 2

ANGLES IN GEOMETRIC FIGURES

- 1 Finding Unknown Angles
- Review 2

CHAPTER # 3

FRACTIONS

- 1 Dividing a Fraction by a Whole Number
 - 2 Dividing a Whole Number by a Fraction
 - 3 Dividing a Fraction by a Fraction
 - 4 Solving Word Problems
- Review 3

CHAPTER # 4

RATIO

- 1 Ratio and Fraction
 - 2 Finding Part and Whole
 - 3 Solving Word Problems
- Review 4

CHAPTER # 5

PERCENTAGE

- 1 Finding the Whole Given a Part and the Percentage
 - 2 Percentage Increase and Decrease
 - 3 Solving Word Problems
- Review 5

CHAPTER # 6

CIRCLES

- 1 Parts of a Circle
 - 2 Area of a Circle
 - 3 Area and Perimeter of Composite Figures
- Review 6

CHAPTER # 7

SPEED

- 1 Speed, Distance and Time
 - 2 Average Speed
 - 3 Solving Word Problems
- Review 7

CHAPTER # 8

VOLUME OF CUBES AND CUBOIDS

- 1 Volume of Cubes and Cuboids
 - 2 Solving Word Problems
- Review 8

CHAPTER # 9

PIE CHARTS

- 1 Reading Pie Charts
 - 2 Solving Word Problems
- Review 9






CHAPTER # 10

SOLID FIGURES

- 1 Solid Figures
 - 2 Nets of Solid Figures
- Review 10

CADET COLLEGE PETARO

CLASS-O-I SAMPLE OF OMR ANSWER SHEET

| CADET COLLEGE PETARO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| ENTRY 2026 FOR ADMISSION TO CLASS O-I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANSWER SHEET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Name of Candidate (IN CAPITAL LETTERS) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 6 | 6 | 6 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 7 | 7 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 9 | 9 | 9 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INSTRUCTIONS 1. This sheet should not be folded or crushed. 2. Use black ball point pen to record the answer. 3. Rough work must not be done on the answer sheet. 4. Please do not make any stray marks on the answer sheet. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WRONG MARKING  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CORRECT MARKING  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Darken one circle deeply for each question in the ANSWER SHEET, as faintly darkened, half darkened circle might be rejected by the Optical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CANDIDATE's Sign.  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INVIGILATOR's Sign.  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUBJECT : ENGLISH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 2 (A) (B) (C) (D) | 12 (A) (B) (C) (D) | 22 (A) (B) (C) (D) | 32 (A) (B) (C) (D) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 (A) (B) (C) (D) | 13 (A) (B) (C) (D) | 23 (A) (B) (C) (D) | 33 (A) (B) (C) (D) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 5 (A) (B) (C) (D) | 15 (A) (B) (C) (D) | 25 (A) (B) (C) (D) | 35 (A) (B) (C) (D) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 7 (A) (B) (C) (D) | 17 (A) (B) (C) (D) | 27 (A) (B) (C) (D) | 37 (A) (B) (C) (D) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| © CADET COLLEGE PETARO EXAMINATION CELL (Secret) 2026 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Computerized Testing System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

CADET COLLEGE PETARO

CLASS-O-I MODEL TEST PAPER M A T H E M A T I C S

Time: 1 Hour

Max. Marks: 100

MARK CORRECT CHOICE BY FILLING IN THE APPROPRIATE BOX ON THE GIVEN ANSWER SHEET

SECTION-A (OBJECTIVE)

[80 Marks]

1. What is 25% of 240?
a) 50 b) 60 c) 70 d) 80
2. Which of the following is a prime number?
a) 9 b) 21 c) 37 d) 39
3. The next term of the sequence 5, 9, 13, 17, ... is:
a) 20 b) 21 c) 22 d) 23
4. 0.75 as a fraction is:
a) $\frac{3}{4}$ b) $\frac{2}{3}$ c) $\frac{1}{4}$ d) $\frac{4}{5}$
5. Arrange in ascending order: 0.2, $\frac{1}{3}$, 0.25
a) 0.2, 0.25, $\frac{1}{3}$ b) 0.25, 0.2, $\frac{1}{3}$
c) $\frac{1}{3}$, 0.25, 0.2 d) 0.2, $\frac{1}{3}$, 0.25
6. Estimate: $49.6 \times 10.2 \%$
a) 400 b) 500 c) 600 d) 700
7. 2^4 equals:
a) 8 b) 12 c) 16 d) 32
8. Ratio of 3 hours to 180 minutes is:
a) 1:1 b) 2:1 c) 1:2 d) 3:1

9. A car travels 120 km in 3 hours. Its rate is:

- a) 20 b) 30 c) 40 d) 60

10. Percentage increase from 40 to 50 is:

- a) 10% b) 20% c) 25% d) 30%

11. $A = 2b + 3c$, find A when $b=2, c=1$:

- a) 5 b) 6 c) 7 d) 8

12. Simplify: $3(2x - 1)$:

- a) $6x-1$ b) $6x-3$ c) $5x-1$ d) $6x+3$

13. Solve: $5x = 45$

- a) 5 b) 7 c) 8 d) 9

14. Solve: $x+y=10, x-y=2$:

- a) (6,4) b) (5,3) c) (8,2) d) (7,3)

15. Factorize $x^2 - 16$:

- a) $(x-4)(x+4)$ b) $(x-8)(x+2)$ c) $(x-2)(x+8)$ d) None

16. Area of rectangle =

- a) $2l+2w$ b) lw c) l^2 d) w^2

17. Circumference of circle =

- a) πr^2 b) $2\pi r$ c) πd^2 d) $4\pi r$

18. Volume of cube (side 3) =

- a) 9 b) 18 c) 27 d) 36

19. Surface area of cube =

- a) $4a^2$ b) $5a^2$ c) $6a^2$ d) a^3

20. Sum of angles on straight line =

- a) 90° b) 180° c) 270° d) 360°

21. Triangle with $30^\circ, 60^\circ, 90^\circ$ is:

- a) Scalene b) Right-angled c) Isosceles d) Obtuse

22. Polygon with 6 sides:

- a) Pentagon b) Hexagon c) Heptagon d) Octagon

23. Parallel lines \rightarrow interior angles sum:

- a) 90° b) 140° c) 180° d) 360°

24. Pythagoras applies to:

- a) Acute b) Obtuse c) Right-angled d) Equilateral

25. Line of symmetry divides shape into:

- a) Equal angles b) Equal sides c) Mirror images d) Congruent triangles

26. Hypotenuse is always:

- a) Smallest b) Longest c) Adjacent d) Opposite

27. Midpoint uses:

- a) Addition b) Subtraction
c) Average of coordinates d) Multiplication

28. Graph $y=mx+c$ is:

- a) Circle b) Parabola c) Straight line d) Curve

29. Symbol for intersection:

- a) \cup b) \cap c) \subseteq d) \emptyset

30. Venn diagrams show:

- a) Fractions b) Set relationships c) Graphs d) Shapes

31. Mode is:

- a) Average b) Middle value c) Most frequent d) Highest

32. $\frac{1}{5}$ as decimal:

- a) 0.1 b) 0.2 c) 0.25 d) 0.5

33. Square of 7:

- a) 14 b) 21 c) 42 d) 49

34. Ratio 8cm to 2cm:

- a) 2:1 b) 3:1 c) 4:1 d) 1:4

35. 15% of 200:

- a) 20 b) 25 c) 30 d) 35

36. Simplify: $10 - (3 - 2)$:

- a) 5 b) 7 c) 8 d) 9

37. Solve: $2x + 1 = 9$:

- a) 3 b) 4 c) 5 d) 6

38. Prism volume: area=12, length=5 →

- a) 12 b) 60 c) 24 d) 17

39. Bar charts display:

- a) Continuous b) Grouped c) Categorical d) Algebraic

40. Complement of A is:

- a) A' b) $A \cup B$ c) $A \cap B$ d) $B - A$

SECTION-B

NOTE: ATTEMPT ALL QUESTIONS.

2. Find next two terms: 12, 9, 6, 3, ... and tell its nth term. [5]

3. Factorize: $x^2 + 7x + 10 = 0$ (by any method) [5]

4. Solve: $2x + y = 14$ [5]

$$x - y = 1$$

5. In a class of 40 students:

- 22 like Maths
- 18 like Science
- 10 like both subjects

a) Draw a Venn diagram showing the information (description). [3]

b) How many like **only Maths**? [1]

c) How many like **only Science**? [1]

***** THE END *****