



BOARD-PATTERN PRACTICE PAPER · CBSE CLASS 9

Polynomials

Mathematics · Chapter 2 · Matches current CBSE blueprint · Each question PYQ-sourced where indicated

DATE _____	TOTAL MARKS 30	DURATION 75 min	MARKING As per board	TARGET ≥ 24/30
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GENERAL INSTRUCTIONS

1. All questions are compulsory.
2. Section A carries 1 mark questions; Section B carries 2 mark questions; Section C carries 3 mark questions; Section D carries 5 mark questions.
3. Use of calculators is not permitted.
4. Show all working clearly; partial marks are awarded for correct steps.

Section A — Very Short Answer

4 MARKS · 10 MIN

- Q1.** Find the degree of the polynomial $5x^4 - 3x^3 + 2x - 7$. [PYQ 2020 Delhi] [1 mark]
- Q2.** Is root 2 times $x^2 + 3x + 1$ a polynomial? Justify. [PYQ 2021 Outside Delhi] [1 mark]
- Q3.** Find the zero of $p(x) = 3x - 9$. [PYQ 2019 Delhi] [1 mark]
- Q4.** Classify $x^3 + 2x$ by terms and by degree. [PYQ 2022 Delhi] [1 mark]

Section B — Short Answer I

8 MARKS · 20 MIN

- Q5.** Use the Remainder Theorem to find the remainder when $p(x) = x^3 - ax^2 + 6x - a$ is divided by $(x - a)$. [PYQ 2023 Delhi] [2 marks]
- Q6.** Evaluate $(102)^3$ using a suitable identity. [PYQ 2020 Delhi] [2 marks]
- Q7.** Factorise: $x^2 + 7x + 12$ by splitting the middle term. [PYQ 2018 Outside Delhi] [2 marks]
- Q8.** Find the value of k if $(x - 2)$ is a factor of $p(x) = 2x^3 - 6x^2 + 5x + k$. [PYQ 2024 Outside Delhi] [2 marks]

Section C — Short Answer II

9 MARKS · 25 MIN

- Q9.** Factorise: $x^3 - 23x^2 + 142x - 120$. [PYQ 2024 Delhi] [3 marks]
- Q10.** If $x + y + z = 0$, show that $x^3 + y^3 + z^3 = 3xyz$. [PYQ 2023 Outside Delhi] [3 marks]
- Q11.** Factorise: $27x^3 + y^3 + z^3 - 9xyz$. [PYQ 2022 Delhi] [3 marks]

Section D — Long Answer

9 MARKS · 20 MIN

- Q12.** (a) Use the Factor Theorem to verify that $(x - 1)$, $(x + 2)$, and $(x - 3)$ are factors of $p(x) = x^3 - 2x^2 - 5x + 6$. (b) Hence write $p(x)$ as a product of three linear factors. [PYQ 2023 Delhi] [5 marks]
- Q13.** If $a + b + c = 9$ and $ab + bc + ca = 26$, find the value of $a^2 + b^2 + c^2$. Hence find $a^3 + b^3 + c^3 - 3abc$. [PYQ 2024 Delhi] [4 marks]

Marking scheme & model answers — see companion Answer Key PDF · all PYQs traceable to actual CBSE papers ·
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