

Model Question Paper

Graphs - Part I

10th Standard

Maths

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

III. Question number 15 is compulsory.

Time : 01:00:00 Hrs

Total Marks : 100

16 x 10 = 160

Part-A

- 1) Draw the graph of $y = 2x^2$.
- 2) Draw the graph of $y = -3x^2$.
- 3) Solve the equation $x^2 - 2x - 3 = 0$ graphically.
- 4) Solve graphically $2x^2 + x - 6 = 0$
- 5) Draw the graph of $y = 2x^2$ and hence solve $2x^2 + x - 6 = 0$
- 6) Draw the graph of $y = x^2 + 3x + 2$ and use it to solve the equation $x^2 + 2x + 4 = 0$
- 7) 1. Draw the graph of the following functions (i) $y = 3x^2$ (ii) $y = -4x^2$ (iii) $y = (x + 2)(x + 4)$ (iv) $y = 2x^2 - x + 3$
- 8) 2. Solve the following equations graphically (i) $x^2 - 4 = 0$ (ii) $x^2 - 3x - 10 = 0$ (iii) $(x - 5)(x - 1) = 0$ (iv) $(2x + 1)(x - 3) = 0$
- 9) Draw the graph of $y = x^2$ and hence solve $x^2 - 4x - 5 = 0$
- 10) Draw the graph of $y = x^2 + 2x - 3$ and hence find the roots of $x^2 - x - 6 = 0$
- 11) 5. Draw the graph of $y = 2x^2 + x - 6$ and hence solve $2x^2 + x - 10 = 0$
- 12) 6. Draw the graph of $y = x^2 - x - 8$ and hence find the roots of $x^2 - 2x - 15 = 0$
- 13) 7. Draw the graph of $y = x^2 + x - 12$ and hence solve $x^2 + 2x + 2 = 0$
- 14) Draw a graph for the following table and identify the variation.

x	2	3	5	8	10
y	8	12	20	32	40

Hence, find the value of y when x = 4.

- 15) a) A cyclist travels from a place A to a place B along the same route at a uniform speed on different days. The following table gives the speed of his travel and the corresponding time he took to cover the distance.

Speed in km / hr x	2	4	6	10	12
Time in hrs y	60	30	20	12	10

Draw the speed-time graph and use it to find (i) the number of hours he will take if he travels at a speed of 5 km / hr (ii) the speed with which he should travel if he has to cover the distance in 40 hrs.

(OR)

- b) A bank gives 10% S.I on deposits for senior citizens. Draw the graph for the relation between the sum deposited and the interest earned for one year. Hence find
- (i) the interest on the deposit of ₹ 650
 - (ii) the amount to be deposited to earn an interest of ₹ 45.
