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## INDIAN SCHOOL MUSCAT SECOND PERIODIC TEST

### MATHEMATICS

CLASS: X

Sub. Code: 041

Time Allotted: 50mts

09.09.2018

Max. Marks: 20

#### GENERAL INSTRUCTIONS:

1. All questions are compulsory.
2. Questions 1 to 4 carry TWO marks each.
3. Questions 5 to 7 carry FOUR marks each.

1. Check whether  $(x + 2)^3 = 2x(x^2 - 1)$  is a quadratic equation or not. 2
2. If one of the roots of the quadratic equation  $x^2 + px - \frac{5}{4} = 0$  is  $\frac{1}{2}$ , find the other root. 2
3. Find k, if the equation  $2kx^2 - 40x + 25 = 0$  has equal roots. 2
4. Solve for x :  $3\sqrt{2}x^2 - 5x - \sqrt{2} = 0$  2
5. Solve the quadratic equation  $2x^2 + 14x + 9 = 0$  by the method of completion of squares. 4
6. Find the discriminant of the equation  $\frac{2}{x+1} + \frac{1}{x-1} = 1$  and hence find the nature of the roots. Find the roots, if they are real. 4
7. Find two consecutive odd positive integers, the sum of whose squares is 290. 4

**End of Question Paper**