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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:
- Answer all the questions.
- Question numbers 1 to 4 carry 2 marks each.
- Question numbers 5 to 7 carry 4 marks each.

1. Find a quadratic equation whose roots are 2 and -3 2

2. If one of the roots of a quadratic equation $2x^2 + p\,x + 4 = 0$ is 2. Find the   2
    other root.

3. Find the value(s) of k, if equation $3x^2 + 2kx + 27 = 0$ has equal roots.   2

4. Solve for x : $\sqrt{3}\,x^2 + 11x + 6\sqrt{3} = 0$ 2

5. Find the   discriminant of the equation $\frac{1}{2x-3} + \frac{1}{x-5} = 1$ and hence find the   4
    nature of the roots. Find the roots, if they are real.

6. A fast train takes 3 hours less than a slow train for a journey of 600 km. If   the   4
    speed of the slow train is 10 km/hour less than that of the fast train, find the
    speeds of the two trains.

7. Solve the quadratic equation $3x^2 - 8x - 3 = 0$ by the method of completing the   4
    square.

End of the Question Paper