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Name: Shrutangi Vaidya Date: 1/8/17  
 Class: X Board: CBSE Batch: - Course Code: Safal  
 Subject: Math Roll No.: 11072 Test ID: CT-1M  
 Marks Obtained: 49 1/2 Max. Marks: 50  
 Centre: Vasna Invigilator Sign.: [Signature]

\* section - D

17.  $p(x) = 2x^4 + 7x^3 - 19x^2 - 14x + 30$

zeros are:  $(\sqrt{2})$  &  $(-\sqrt{2})$

$\therefore$  By factor thm, the factors are:  $(x - \sqrt{2})(x + \sqrt{2})$   
 $= (x^2 - 2)$

To find out the other zeroes, we must divide  $p(x)$  by  $(x^2 - 2)$

$$\begin{array}{r}
 2x^2 + 7x - 15 \\
 x^2 - 2 \overline{) 2x^4 + 7x^3 - 19x^2 - 14x + 30} \\
 \underline{-2x^4 + 0x^3 + 4x^2} \phantom{-14x + 30} \\
 7x^3 - 15x^2 - 14x \phantom{+ 30} \\
 \underline{-7x^3 + 0x^2 + 14x} \phantom{+ 30} \\
 -15x^2 + 0x + 30 \\
 \underline{+15x^2 + 0x - 30} \\
 0
 \end{array}$$

$\therefore$  The other factor is  $(2x^2 + 7x - 15)$   
 $= 2x^2 + 10x - 3x - 15$   
 $= 2x(x + 5) - 3(x + 5)$   
 $= (2x - 3)(x + 5)$

Thus, to find the zeroes,

$2x - 3 = 0$  or  $x + 5 = 0$

$\therefore$   $x = \frac{3}{2}$  or  $x = -5$