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Name : VIDIT H. SHAH Date : 28/8/17

Class : 9 Board : CBSE Batch : - Course Code : Samarth

Subject : MATHS Roll No. : 13701 Test ID : CT-3M

Marks Obtained : 48 Max. Marks : 50

Centre : Vasna Invigilator Sign. : 9

SECTION A

Q1. $\frac{1}{\sqrt{50}} = \frac{1}{\sqrt{2\times5\times5}} = \frac{1}{\sqrt{2\times5^2}} = \frac{1}{5\sqrt{2}}$

$\therefore \frac{1}{5\sqrt{2}} = \frac{1}{5\sqrt{2}} \times \frac{5\sqrt{2}}{5\sqrt{2}} = \frac{5\sqrt{2}}{(5\sqrt{2})^2} = \frac{5\sqrt{2}}{25\times2} = \frac{5\sqrt{2}}{50} = \frac{\sqrt{2}}{10}$ 2^{-1} 2

Ans: (a) $5\sqrt{2}$ (b) $\sqrt{2}$ ← $\frac{1}{\sqrt{50}} \times \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{\sqrt{100}} = \frac{\sqrt{2}}{10}$

Q2

Anc (b) 3 ✓ 1

Q3. $p(x) = x^{31} + 31$

$x + 1 = 0$

$x = -1$

$p(x) = (-1)^{31} + 31$

$= -1 + 31$

$= 30$

Ans (c) 30 ✓ 1

Q4. $(x+a)(x+b) = x^2+(a+b)x+ab$

$\left(x+\frac{1}{2}\right)\left(x+\frac{3}{2}\right)$

$= x^2+\left(\frac{1}{2}+\frac{3}{2}\right)x+\left(\frac{1}{2}\right)\left(\frac{3}{2}\right)$

$= x^2+\left(\frac{4}{2}\right)x+\frac{3}{4}$

$= x^2+2x+\frac{3}{4}$

Ans = (b) $x^2+2x+\frac{3}{4}$

1

SECTION B

Qs $x = 0.\overline{237} - 1$

$1000x = 237.\overline{237} - 2$

Subtracting 2 − 1

$1000x - x = 237.\overline{237} - 0.\overline{237}$

$999x = 237$

$x = \frac{237}{999} = \frac{79}{333}$

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