SESSION 2013 – 14
UNIT TEST I
MATHEMATICS
SET B

Class : VIII **Max Marks : 40**
Date : 6 .5.2013 **Time Allowed : 1 ½ hour**

GENERAL INSTRUCTIONS

- **This question paper has 13 questions and 2 printed pages.**
- **All the questions are compulsory.**
- **All the parts of Q 1 carry 1 mark each, Qs 2-7 carry 2 marks each, Qs 8-11 carry 3 marks each and Qs 12 & 13 carry 4 marks each.**

1. (a) If $\frac{-20}{25} = \frac{28}{x}$, then $x =$ _____ . 1

(i) -35 (ii) -20 (iii) 35 (iv) 20

(b) Reciprocal of $\frac{2}{9}$ is _____. 1

(i) $\frac{2}{9}$ (ii) $\frac{9}{2}$ (iii) $\frac{-9}{2}$ (iv) None of these

(c) Multiplicative identity of any rational number $\frac{p}{q}$ is _____ . 1

(i) 1 (ii) -1 (ii) 0 (iv) $\frac{p}{q}$

(d) Which of the following statements is not true ? 1

(i) 5 is a rational number.
(ii) Additive inverse of $\frac{1}{3}$ is $\frac{-1}{3}$.
(iii) $\frac{8}{0}$ is a rational number.
(iv) The reciprocal of $\left(\frac{-8}{7}\right)$ is $\left(\frac{-7}{8}\right)$.

(e) Multiplicative inverse of any rational number $\frac{a}{b}$ is _____. 1

(i) $\frac{-a}{b}$ (ii) $\frac{b}{a}$ (iii) $\frac{-b}{a}$ (iv) 0

(f) If $2x - 2 - x + 4$, then x equals _____. 1

(i) 2 (ii) 3 (iii) 6 (iv) -6

(g) If $\frac{x}{0.3} = 3.3$ then $100x$ is equal to _____. 1

(i) 300 (ii) 330 (iii) 99 (iv) 990

(h) Three consecutive multiples of 7 whose sum is 777 is _____ . 1

(i) 245,259,273 (ii) 252,259,266
(iii) 252,266,273 (iv) 238,259,280

2. Write $\frac{-6}{21}$ in standard form. 2

3. Verify the commutative property for addition of $\left(\frac{8}{9}\right)$ and $\frac{11}{-3}$. 2

4. Verify that $-(-x) = x$ for $x = \frac{-5}{13}$. 2

5. Solve $4(2x - 5) + 17 = 29$. 2

6. Solve $\frac{3x+5}{2x+7} = 4$. 2

7. If $\frac{7}{2}$ of a number is 13 more than $\frac{1}{6}$ of the number, find the number. 2

8. Verify $\left[\left(\frac{-8}{9}\right) X \left(\frac{-1}{5}\right)\right] + \left[\left(\frac{-8}{9}\right) X \left(\frac{-3}{7}\right)\right] = \left(\frac{-8}{9}\right) X \left[\left(\frac{-1}{5}\right) + \left(\frac{-3}{7}\right)\right]$ and name the property used. 3

9. Find five rational numbers between $\frac{-1}{3}$ and $\frac{1}{3}$. 3

10. Solve $x - \frac{2x+8}{3} = \frac{1}{4}\left[x - \frac{2-x}{6}\right] - 3$. 3

11. Four fifth of a number is more than three fourth of the number by 4. Find the number. 3

12. The length of a rectangle exceeds its breadth by 4cm. If the length and the breadth are each increased by 3 cm, the area of the new rectangle will be 81 cm^2 more than that of the given rectangle. Find the length and breadth of the given rectangle. 4

13. (a) Rashmi enjoys helping out small children with their studies. One day she asks them to find a number which when multiplied by $\frac{-1}{6}$ gives a product as $\frac{-17}{9}$.
    (i) Find the number she gave to the children.
    (ii) Rashmi does not charge any fee from the children. Mention any two values displayed by her. 4
    (b) Represent $-\frac{5}{8}$ on a number line.