The City School

Boys Campus North Nazimabad
Subject: Mathematics
Topic Test 4
Topic: Algebra and Indices
Paper C

Name_____ Class 9/Sec:____ Date:_____ Max. Marks[15]

Q1: Simplify the following indices leaving them in index form. (3)

(Law 1: Addition $x^a \times x^b = x^{a+b}$)

1) $3q^2 \times 2q^5$ 2) $3p^2 \times 4p^{-5}$ 3) $5a^3 \times 2b^2 \times 2a^2$

Q2: Simplify the following indices leaving them in index form. (3)

(Law 2: Subtraction $x^a \div x^b = x^{a-b}$)

1) $d^8 \div d^3$ 2) $\frac{4a^3 \times a^8}{a^4}$

Q3: Express the following in Ordinary Notation and Standard Form respectively: (3)

a) $3.5 \times \mathbf{10^4} + \mathbf{4.5} \times \mathbf{10^5}$
b) $4.67 \times \mathbf{10^3}$
c) 3769000

Q4: Expand each of the followings: (6)

a) -6(-3x $+3y$)(6x – 6y)
b) (4x – 3)(2x -5)
c) (4x – 3)(2x -5)

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Paper D

Name_____ Class 9/Sec:____ Date:_____ Max. Marks[15]

Q1: Where possible find the value of the following in $fractional$ form. (2)

(Law 3: Negative $x^{-2} = \frac{1}{x^a}$)

1) $\frac{4p^{-2} \times 5p^{-3}}{10p^2}$ 2) $5^3 \times 5^5$

Q2: Simplify the following in index form: (3)

(Law 4: Zero $x^0 = 1$)

1) 8^0 2) $\frac{6d^3 \times 8d^4}{3d^2 \times 4d^5}$

Q3: Simplify the following in index form: (2)

(Law 5: Multiplication $(x^a) = x^{a \times b}$

1) $(a^2)\,(a^3)^7\,(a^3)$

Q3: Express the following in Ordinary Notation and Standard Form respectively: (3)

a) $(8.64 \times 10^{10}) \div (3.6 \times 10^6)$
b) 33.0006
c) 3769000

Q4: Expand each of the followings: (6)

a) $3(2x + 7y)(2x - 7y)$
d) -6(-3x $+3y$)(6x – 6y)
e) (4x – 3)(2x -5)