Subject: - Mathematics
Topic: - Algebraic Expressions

TEST PAPER

CBSE-7th
Time: - 60mins, M.M:-25

(SECTION A – 1 MARK)

1. $a^2 - (-a)^2$ is equal to

a) $-2a^2$ b) $2a^2$ c) 0 d) a^4

2. Find the value of $-4x^2y^2 + 6xy + 8x + 12y - 1$, when $x = -2$, $y = -1$

a) -23 b) 23 c) -33 d) 33

3. Two like terms differ only in their _____ coefficients.

4. The value of $ax^2 + bx + c$ at $x = -\frac{b}{a}$ is

a) a b) $b^2 - 4ac$ c) 0 d) c

5. A binomial is an algebraic expression with

a) degree 2 b) two terms c) two variables d) none of these

(SECTION B – 2 MARKS)

1. In a class of $(4y^2 + y - 8)$ students, $2y + 16$ play football and the rest play basketball. How many play basketballs?

2. How much is 0 greater than $-a^2 - ab + 7b^2$?

3. What should be added to $-3a + 7b - 16$ to get the sum -8?

(SECTION C – 3 MARKS)

1. If $4a - 3 = 13$ then find the value of $10a^2 - 5a + 6$.

2. By how much is sum of $a^4 - 6a^2b^2 + b^4$ and $-2a^4 + 5a^2b^2 + 3b^4$ greater than $-a^4 - a^2b^2 - 4b^4$?

(SECTION D – 4 MARKS)

1. From the sum of $4 + 3x$ and $5 - 4x + 2x^2$, subtract the sum of $3x^2 - 5x$ and $-x^2 + 2x + 5$ and write the degree of the difference obtained?

2. The area of the square is $(4x^2 - 2x - 6)$ sq. units. A triangle inside the square has an area $(x^2 - 4x + 5)$ sq. units. Find the area of the shaded portion.