TEST PAPER: MATHEMATICS

Time: 50 Minutes **Class: 8th C.B.S.E.**

Max. Marks: 30 Marks **Date: 21ST November, 2018**

Marking Scheme: *Three questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.*

Question 1:

a. Subtract a – 2b – c from the sum of 3a – b + c and a + b – 3c.

b. Evaluate: $(1/2)^{-2} + (2/3)^{-2} + (3/4)^{-2}$

c. Multiply the following binomials:
   (i) (ax - by) (ax + by)
   (ii) (x + 9) by (y + 2)

Question 2:

a. If $5^{2x+1} \times 25 = 5^{x+4}$, find the value of x.

b. Multiply polynomial by monomial:
   (i) $(x + x^2 + 1)$ and 5x
   (ii) $(am + bm^2 + 5m)$ and m^2

c. Find the product of the three monomials:
   (i) $7ab^2c^5$, $4a^3b^2c^2$ and $2abc^2$
   (ii) xy^2, $2x^2y$ and xy

Question 3:

a. If $P = a^2 – 2bc + b^2$, $Q = -b^2 + bc – c^2$ and $R = c^2 + cb + a^2$ then, find the value of P + Q + R.

b. Find the value of: $(3^{-1} + 4^{-1})^{-1} \div 5^{-1}$

c. i. By what number should $(-6)^{-1}$ be multiplied so that the product becomes 9^{-1}?
   ii. Find the value of n, when $3^n = 243$