ST. LAWRENCE HIGH SCHOOL

TOPIC –Polynomial &Factorisation

Subject : Mathematics **Class-9** **F. M. 15**

WORKSHEET NO. - 19 **First term** **Date: 27.03.2021**

Q.1) Choose the correct option: (1x15=15)

i) When $kx^3 + 9x^2 + 4x - 10$ is dividedby (x+1) the remainder is 2. Then the value of k is

a)-7 b) -5 c)-3 d) -1

ii) If y = f(x) = $\frac{x+1}{x-1}$ then the value of f(y) is

a) -2 b) 0 c) x d)1/x

iii) What number should be subtracted from the expression $2x^3 - 5x^2 + 5x$ so that (2x-3) will be factor of the expression

a)3 b)2 c) 1 d) -3

iv)What number should be added with the expression $4x^3 - 8x^2 + 3x$, so that (2x+1) will be a factor of the expression

a) 1 b)2 c)4 d)3

v)When the expressions $x^3 - kx^2 + x + 6$ and $2x^3 - x^2 - (k+3)x - 6$ are divided by (x – 3), the remainder are same. Then the value of k is

a)1 b)2 c)3 d)4

vi) If the polynomials $f(x) = x^3 - kx^2 + x + 6$ and $g(x) = x^3 - kx^2 + x + 6$, be such that f(a) = 0 but g(a) ≠0, then (x – a) is a factor of

a)f(x) + g(x) b) f(x) – g(x) c) f(x)g(x) d)None of these

vii)If $36 - 4x^2 = (6 + kx)(6 - 2x)$ then the value of k is

a) 2 b) -2 c) 4 d)-4

viii)If $x^4 - 81 = (x - 3)(x + 3)(x^2 + k)$, then k =

a) 6 b)3 c) 12 d)9

ix) Sum of the factors of $a^2 - 5a - 150$ is

a) 2a - 5 b) 2a + 5 c) a - 15 d)a + 10

x)The value of $(15^3 + 10^3)/(15^2 - 10^2)$ is

a)15 b) 25 c)35 d) 20

xi)If$x^3 - 0.125 = (x - 0.5) (x^2 + 0.5x + k)$ then the value of k is

a) 2.5 b) 0.25 c) 0.5 d)25

xii)If a=1, b=2, c=3 then the value of $(a^3 + b^3 + c^3 - 3abc)/[(ab + bc + ca) - (a^2 + b^2 + c^2)]$ is

a) 6 b) -6 c) 2 d) 3

xiii)If $2x^2 + px - 14 = (x - 2)(2x + q)$ is an identity then the value of p and q is

a) p=7, q=2 b) p=3, q=7 c)p=-7, q=7 d)p=-3, q=-7

xiv) The sum of the factors of $a^2 - b^2 - c^2 + 2bc$ is

a)a + b + c b) a - b - c c) 2a d) a - b + c

xv)The value of $8^3 - 5^3 - 3^3$ is

a) 120 b)360 c)40 d)-120

-Chaitali Roy