STD : X   MAX MARK S: 20

SUBJECT : MATHEMATICS (E) : LEVEL 2   TIME : $1 \; hr$
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Q.1.A) Select and write the correct alternative from those given below.   (1)

　　If $9x - 7y = 15 \quad and \quad 7x - 9y = 13$, then the value of $x + y$ is:

　　　　(a) −3 　　　(b) − 1 　　　(c) 1 　　　(d) 3

B) Find the solution of **ANY ONE** of the following pair of linear equations: (3)

　　　i) $3x + 4y = 18 \quad and \quad 7x - 3y = 5 \qquad (By \; Elimination \; method \;)$

　　　ii) $x - y = 7 \quad and \quad 2x + 7y = -13 \qquad (By \; Substitution \; method)$

C) Divide the polynomial ($\mathbf{2x^3 - 5x^2 - 3x + 7}$) $\mathbf{by}$ ($\mathbf{2x - 3}$) and find the quotient   (3)

　　and remainder. Also, express the dividend in the form:

　　　　" Dividend = divisor × quotient + remainder "

D) Find the solution of the following pair of linear equations graphically :   (3)

　　　　　$x - y = 5 \quad and \quad 2x + y = 7$

　　Rewrite and complete the following tables.

　　　(Plot at least 3 points for each line on a graph paper)

　　　　　　$x - y = 5$　　　　　　　　　　　　　$2x + y = 7$

x			
y			

x			
y			

Q.2.A) Select and write the correct alternative from those given below.   (1)

　　The distance of the point P(12, −5) from the origin is :

　　　(a) 7 unit 　　(b) 17 units 　　(c) 14 units 　　(d) 13 units

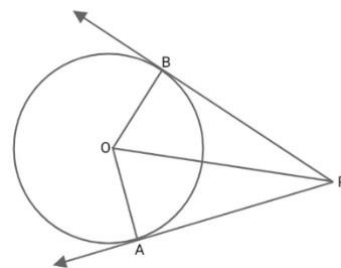B)   Attempt the following.   (2)

　i) If the sum of the zeroes of the polynomial $3x^2 - 2kx + 6$ is 3, then find the value of k .

　ii) Find a quadratic polynomial in variable x whose zeroes are $\sqrt{5} \; and - \sqrt{5}$.

C) Given: Point O is the centre of the Circle . Two tangent   (3)

　　segments PA and PB are drawn from an external
　　point P to the Circle at A and B respectively.

　　Prove that :   PA = PB

D) i) Find the area of Δ ABC formed by joining the points A(10, −6), B(2, 5) and C(−1, 3).   (2)

　ii) Find the coordinates of the point P (x, y) which divides the line segment joining   (2)
　　the points A(5, −2) and B(9, 6) internally in the ratio 3 : 1 .

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