

2024 – 2025
Second Term Examination
S.4 Mathematics Compulsory Part Paper 1

Name: _____

S.4 _____ ()

5. When $x^3 - 4x^2 + 7x - 8$ is divided by $p(x)$, the quotient and the remainder are $x - 2$ and -2 respectively. Find $p(x)$. (2 marks)

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6. Let $f(x) = kx - 3$. It is given that $f(-2) = 1$.
- (a) Find the value of k .
- (b) Solve the equation $f(x) \cdot (x - 2) = 3$. (4 marks)

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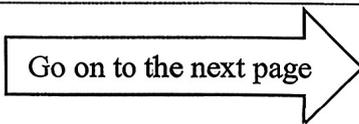
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SECTION A(2) (31 marks)

9. Let $f(x) = ax^3 - x^2 + bx - 4$. It is given that $f(x)$ is divisible by $3x+1$. When $f(x)$ is divided by $x-2$, the remainder is 14. Find the values of a and b . (3 marks)

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10. α and β are the roots of the quadratic equation $2x^2 + (12 - 2k)x - k = 0$. It is given that $\alpha + \beta = \alpha\beta$.
- (a) Find the value of k . (2 marks)
- (b) Find the value of $\alpha^2 + \beta^2$ (2 marks)

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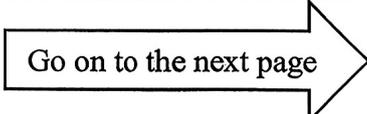
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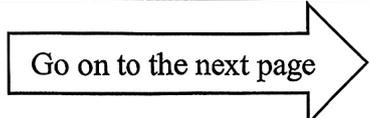
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