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PURE MATH

ALGEBRA AND FUNCTION

Level & Board	EDEXCEL (A-LEVEL)
ΤΟΡΙC:	FUNCTIONS
PAPER TYPE:	QUESTION PAPER - 3
TOTAL QUESTIONS	8
TOTAL MARKS	38

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Questions

Q1.

The function f is defined by

$$f(x) = x^2 + 2x + 1, x \in \mathbb{R}, x \ge -1$$

(a) state the range of f

(1)

(b) Find an expression for $f^{-1}(x)$ and state its domain

(4) (Total for question = 5 marks)

Q2.

The function f is defined by

$$g(x) = 3x - 4, x \in \mathbb{R}, x \ge 2$$

(a) state the range of f

(2)

(b) Find an expression for $f^{-1}(x)$ and state its domain

(4) (Total for question = 6 marks)

Q3.

The function f is defined by

$$h(x) = e^x, x \in \mathbb{R}$$

(a) state the range of f

(b) Find an expression for $f^{-1}(x)$ and state its domain

(3)

(3)

(Total for question = 6 marks)

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Q4.

The function f is defined by

$$p(x) = x^2 - 4x + 3, x \in \mathbb{R}, x \le 3$$

(b) Find an expression for $f^{-1}(x)$ and state its domain

(2)

(2)

(Total for question = 4 marks)

Q5.

The function f is defined by

$$r(x) = \log_2 \sqrt{x}, x \in \mathbb{R}, x > -4$$

(a) state the range of f
(b) Find an expression for
$$f^{-1}(x)$$
 and state its domain
(2)
(2)

(Total for question = 4 marks)

Q6.

The function f is defined by

 $r(x) = x^3 + 10, x \in \mathbb{R},$

(a) state the range of f

(b) Find an expression for $f^{-1}(x)$ and state its domain

(2) (Total for question = 4 marks)

(2)

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Q7.

The function f is defined by

$$v(x) = \log_3(|x| - 10), x \in \mathbb{R},$$

(a) state the range of f

(4)

(Total for question = 4 marks)

Q8.

The function f is defined by

$$r(x) = lne^x, x \in \mathbb{R} \ x \neq 1$$

(a) state the range of f

(b) Find an expression for $f^{-1}(x)$ and state its domain

(3)

(2)

(Total for question = 5 marks)



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- Founder & CEO of Chemistry Online Tuition Ltd.
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