



CHEMISTRY ONLINE
— **TUITION** —

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PURE MATH

ALGEBRA AND FUNCTION

Level & Board	EDEXCEL (A-LEVEL)
TOPIC:	DIFFERENTIATION
PAPER TYPE:	QUESTION PAPER - 10
TOTAL QUESTIONS	8
TOTAL MARKS	43

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Questions**Q1.**

A curve has equation

$$y = e^{\cos(x^2)}$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(3)

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)

(Total for question = 5 marks)

Q2.

A curve has equation

$$f(x) = \sin(2x^2 + 3x)$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(3)

(b) Hence find the exact range of value of x for which the curve is increasing.

(3)

(Total for question = 6 marks)

I am Sorry !!!!!

Q3.

A curve has equation

$$g(x) = e^{3x^2-2x}$$

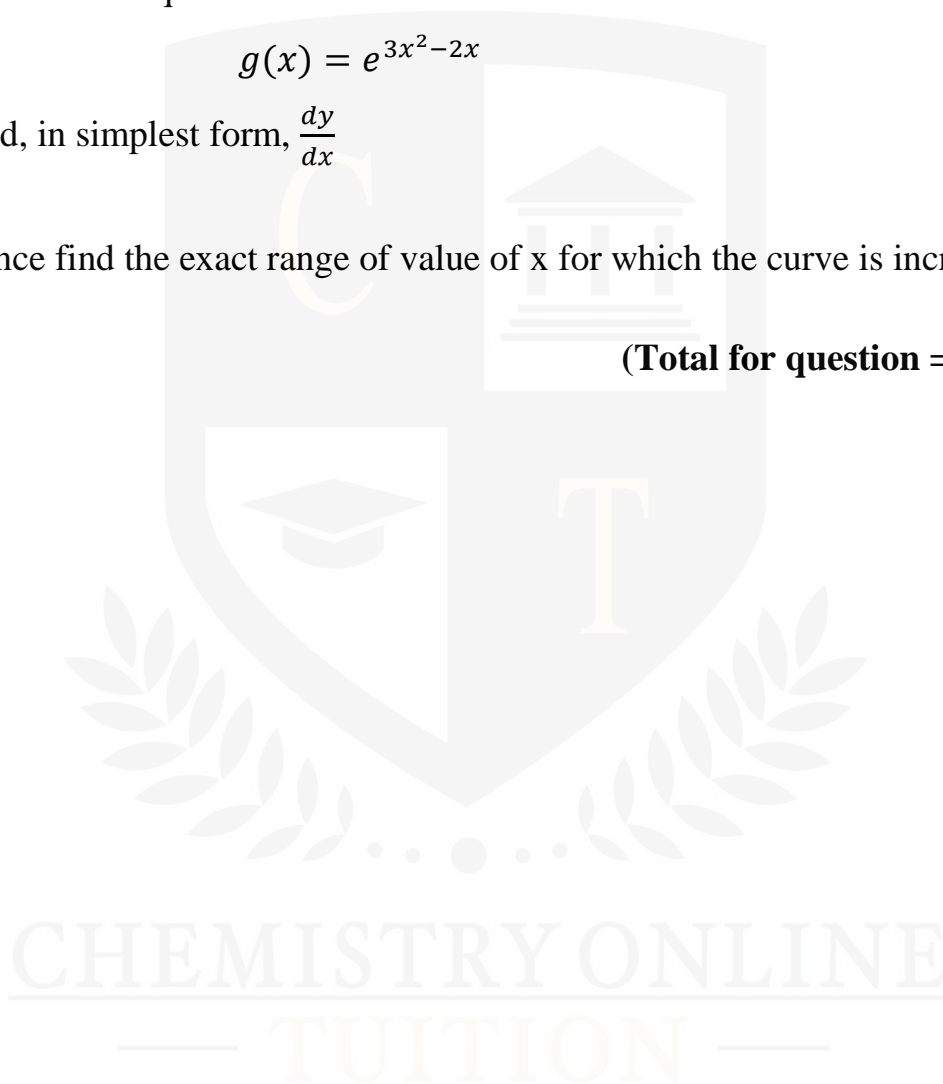
Find, in simplest form, $\frac{dy}{dx}$

(2)

(a) Hence find the exact range of value of x for which the curve is increasing.

(3)

(Total for question = 5 marks)



I am Sorry !!!!!

Q4.

A curve has equation

$$h(x) = \sqrt{2x^3 - x^2 + 1}$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(3)

(b) Hence find the exact range of value of x for which the curve is increasing.

(3)

(Total for question = 6 marks)

Q5.

A curve has equation

$$y(x) = \ln(5x^2 - 3x + 2)$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(2)

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)

(Total for question = 4 marks)

Q6.

A curve has equation

$$f(x) = (2x + 1)^4$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(4)

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)

(Total for question = 6 marks)

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Q7.

A curve has equation

$$y(x) = \cos(2x^2 - x)$$

(a) Find, in simplest form, $\frac{dy}{dx}$ **(2)****(b)** Hence find the exact range of value of x for which the curve is increasing.**(2)****(Total for question = 4 marks)****Q8.**

A curve has equation

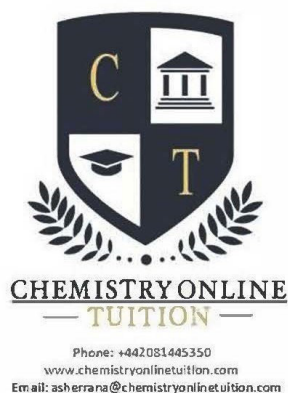
$$f(x) = e^{2x^3 - x}$$

(a) Find, in simplest form, $\frac{dy}{dx}$ **(4)****(b)** Hence find the exact range of value of x for which the curve is increasing.**(3)****(Total for question = 7 marks)**

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DR. ASHAR RANA



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- Tutoring students in UK and worldwide since 2008
- CIE & EDEXCEL Examiner since 2015
- Chemistry, Physics, and Math's Tutor

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