

**INTEGRATION (Q 8, PAPER 1)**

**LESSON NO. 2: ALGEBRAIC INTEGRATION BY SUBSTITUTION**

**2006**

8 (b) Evaluate (i)  $\int_1^2 x(1+x^2)^3 dx$

**2005**

8 (b) Evaluate (i)  $\int_1^4 \frac{2x+1}{x^2+x+1} dx$

**2003**

8 (b) (i) Evaluate  $\int_0^1 \frac{2x}{\sqrt{1+x^2}} dx$

**2002**

8 (b) Evaluate (i)  $\int_2^7 \frac{2x-4}{x^2-4x+29} dx$

**2001**

8 (b) Evaluate (ii)  $\int_0^4 \frac{(x+4)}{\sqrt{x^2+8x+1}} dx.$

**ANSWERS**

**2006** 8 (b) (i)  $\frac{609}{8}$

**2005** 8 (b) (i)  $\ln 7$

**2003** 8 (b) (i)  $2(\sqrt{2}-1)$

**2002** 8 (b) (i)  $\ln 2$

**2001** 8 (b) (ii)  $6$