

Answer all ELEVEN questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 Using calculus find the exact value of $\int_{\frac{\pi}{4}}^{\frac{\pi}{3}} \cos 4\theta d\theta$

Give your answer in the form $-\frac{\sqrt{a}}{b}$ where a is a prime number and b is an integer.

(4)

(Total for Question 1 is 4 marks)



P 6 6 3 1 0 A 0 3 3 6