ANSWER ALL QUESTIONS

QUESTION 1: (07 MARKS)

(a) Using the Taylor Series show that

$$\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \cdots$$

(b) Hence find the Taylor Series of cos x

(05 Marks)

(02 Marks)



QUESTION 3: (08 MARKS)

(a) Given
$$f(x) = x^3 \sqrt{(1-x^2)}$$
, find $f'(x)$.

(04 Marks

(b) Evaluate

$$\int \frac{\ln x}{x} dx$$

(04 Marks)

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