



Calculus II CAT

Calculus for Statistics III (Jomo Kenyatta University of Agriculture and Technology)



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CALCULUS II BMA1204

MKU – DIBEL

1. Evaluate the following:

(a) $\int x^2 e^{2x} dx$ [4 marks]

(b) $\int 7x^3 \sqrt[3]{21x^4 - 7} dx$ [3 marks]

(c) $\int \frac{5x^2 + 20x + 6}{x^3 + 2x^2 + x} dx$ [4 marks]

(d) $\int \frac{2}{\sqrt{9 - 4x^2}} dx$ [4 marks]

(e) $\int \sin^4 x \cos^5 x dx$ [3 marks]

(f) $\int \tan^4 x dx$ [3 marks]

(g) $\int_0^{\frac{\pi}{2}} \frac{d\theta}{2 + \cos \theta}$ [3 marks]

(h) $\int \frac{\sin^2 x}{1 - \cos x} dx$ [3 marks]

2. Use Simpson Rule and trapezium rule to evaluate $\int_1^3 \frac{1 + \ln 4x}{e^{3x}} dx$ using n=8 intervals. [7 marks]