

POLITEKNIK KUCHING SARAWAK

Mathematics, Science and Computer Department



INTENSIVE MATHEMATICS (PBM1035) Session December 2017 MODEL EXAM PAPER (QUESTION 7)

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working. You may use a non-programmable scientific calculator.
- (a) Find $\frac{dy}{dx}$ for each of the following:
 - y = 6
 - (ii) y = 5x
 - (iii) $y = -3x^4$
 - (iv)
 - (v)
- (b) Differentiate each of the following functions:
 - $y = -8x^4 3x + 5$ (i)
 - (ii)
 - $y = \frac{1}{x^3} + 4x^2 3x 1$ $y = 5 2x + 3x^2 \frac{1}{x}$ (iii)
- (c) Determine the differentiation for the following functions.
 - y = x(2x)
 - y = x(3x + 2)(ii)

 - (iii) y = -x(2 x)(iv) $y = \frac{3x^2 + 2x 1}{x^2}$ (v) $y = \frac{x(x-2)}{3}$