

KFUPM      SEM II (Term 052)    Name: \_\_\_\_\_    Serial #: \_\_\_\_\_

MATH 102-4    Quiz # 5                    ID: #: \_\_\_\_\_

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1. (5-points each) Evaluate the integral that converge

(a) 
$$\int_{e/3}^{\infty} \frac{1}{x(\ln 3x)^4} dx.$$

(b) 
$$\int_0^{\pi/6} \frac{\cos x}{\sqrt{1 - 2 \sin x}} dx.$$

2. (5-points) Find the Maclaurin polynomial  $P_n$  for  $f(x) = \frac{1}{1+2x}$ . **Show your steps. [Hint: First find  $P_0, P_1, P_2, P_3$  and  $P_4$  and then find  $P_n$  and write it in a closed form.]**

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