



Istanbul University-Cerrahpasa
Engineering Faculty
Mid term examination – Spring 2019

Course Title: **Calculus II— Sample Exam**
Date of Examination: 10.04.2019
Time duration: 75 Minutes

Student's name:
Student's ID:

Q.1) Determine whether each integral is convergent or divergent. Evaluate those that are convergent.

a) $\int_e^{\infty} \frac{dx}{x \ln x}$

b) $\int_0^1 \frac{4dx}{x^5}$

(25 Puan)

Q.2) Find the sum of the following series.

$$\sum_{n=1}^{\infty} \frac{1}{(2n-1)(2n+1)} = \frac{1}{1.3} + \frac{1}{3.5} + \frac{1}{5.7} + \dots$$

(25 Puan)

Çözüm:

Q.3) Determine whether the following series convergent or divergent.

$$\sum_{n=1}^{\infty} \frac{n}{n^2 + 1}$$

(25 Puan)

Çözüm:

Q.4) Determine

(25 Puan)

Çözüm:

Dr. Uğur Odabaşı