

**King Fahd University of Petroleum and Minerals**  
**Department of Mathematics and Statistics**  
**Math 102 - Make UP Quiz**

Name:

Student ID #:

**Question.** Decide whether the following series converge or diverge. Give reasons to your answers.

(1) 
$$\sum_{n=1}^{\infty} \frac{e^{1/n}}{n^2}$$

(2) 
$$\sum_{n=1}^{\infty} \frac{\sin(n)}{4^n}$$

**PARTS (3) and (4) ARE ON THE BACK OF THE PAGE.**

$$(3) \sum_{n=1}^{\infty} e^{-n} n!$$

$$(4) \sum_{n=1}^{\infty} \left(1 + \frac{1}{n}\right)^{n^2}$$