

EXAM FOR TOPOLOGY
WINTER SEMESTER 2025/2026

QUESTIONS SET NO. 2

1. Give a definition of a metric space. Provide examples. What are relation(s) between the notions of a metric space and a topological space?
2. Do there exist two topological spaces, and a continuous map between them, such that:
 - a) the image of any open set is closed?
 - b) the image of any closed set is open?
 - c) the conditions a) and b) are satisfied simultaneously?