

**EXAM FOR TOPOLOGY**  
**WINTER SEMESTER 2025/2026**

QUESTIONS SET NO. 5

1. Give a definition of a base of topological space. Provide examples. Formulate and proof a criterion for a set to form a base.
2. Is it true that:
  - a) the product of two discrete topologies is discrete;
  - b) the product of two trivial topologies is trivial?