- 1. In graph theory, how many nodes does a single edge connect?
  - a. One node
  - b. Two nodes
  - c. Three nodes
  - d. Any number of nodes
- 2. Which of the following tasks do Graph Neural Networks (GNNs) typically struggle with?
  - a. Node classification
  - b. Link prediction
  - c. Cycle detection
  - d. Graph clustering
- 3. In the context of cell complexes, what does a p-cell represent?
  - a. A cell with p sides
  - b. A cell with p vertices
  - c. An element of dimension p
  - d. A cell with p edges
- 4. What does the acronym FORGE stand for in the context of graph learning?
  - a. Framework for Higher-Optimized Representation in Graph Environments
  - b. Framework for Higher-Order Representations in Graph Explanations
  - c. Functional Optimization for Regular Graph Embeddings
  - d. Fast Operational Research for Graph Equations
- 5. After applying FORGE, how do explainers perform compared to Random baselines?
  - a. They consistently surpass Random baselines
  - b. They perform equally to Random baselines
  - c. They occasionally underperform Random baselines
  - d. They consistently underperform compared to Random baselines
- 6. Based on the lecture content: What can the boundary relation be loosely translated to in graph theory?
  - a. Nodes
  - b. Edges
  - c. Faces
  - d. Weights
- 7. What does guardedness mean as discussed in the lecture?
  - Personal information is guarded from being revealed to the outside world due to privacy reasons
  - b. A class is guarded if a classifier can't identify data points belonging to that class
  - c. A model is guarded if you cannot retrieve training data from it
  - d. An attribute is guarded if you can't classify along that attribute

- 8. What is the process/transformation used to achieve guardedness?
  - a. Affine Concept Erasure
  - b. Affine Attribute Erasure
  - c. Affine Model Erasure
  - d. Affine Class Erasure
- 9. How are steering vectors generally defined as discussed in the lecture?
  - a.  $v = \mu_0 \mu_1$  where  $\mu_0$  is the mean of undesirable class and  $\mu_1$  is the mean of desirable class
  - b. v =  $\mu_0$   $\mu_1$  where  $\mu_0$  is the mean of desirable class and  $\mu_1$  is the median of desirable class
  - c. v =  $\mu_0$   $\mu_1$  where  $\mu_0$  is the mean of desirable class and  $\mu_1$  is the mean of undesirable class
  - d.  $v = \mu_0 \mu_1$  where  $\mu_0$  is the mean of undesirable class and  $\mu_1$  is the median of undesirable class
- 10. Which of the following is a limitation of graphs as a data structure?
  - a. They can only represent hierarchical relationships
  - b. They can only model pairwise relationships between nodes
  - c. They are restricted to acyclic structures
  - d. They cannot represent directed edges