

MCQ Assessment - Answers Included

Question 1: What is the main issue with conventional CF-based methods?

- a: They rely solely on ratings.
- b: They are too complex to implement.
- c: They cannot handle sparse data.
- d: They are not scalable to large datasets.

Correct Answer: c

Question 2: What is the purpose of CTR?

- a: To improve the latent representation learned by CF.
- b: To reduce the sparsity of rating data.
- c: To combine item content information with ratings.
- d: To make recommendations based on user demographics.

Correct Answer: c

Question 3: What is the main limitation of CTR?

- a: It is not suitable for sparse auxiliary information.
- b: It requires a large amount of training data.
- c: It cannot handle non-i.i.d. input.
- d: It is computationally expensive.

Correct Answer: a

Question 4: What is the main contribution of CDL?

- a: It extends deep learning to non-i.i.d. input.

- b: It combines deep representation learning with collaborative filtering.
- c: It addresses the sparsity problem in CF.
- d: All of the above.

Correct Answer: d

Question 5: What type of model is CDL?

- a: Hierarchical Bayesian model
- b: Neural network model
- c: Linear regression model
- d: Decision tree model

Correct Answer: a

Question 6: What is the purpose of deep representation learning in CDL?

- a: To extract features from item content information.
- b: To predict user ratings.
- c: To improve the latent representation learned by CF.
- d: To reduce the sparsity of rating data.

Correct Answer: a

Question 7: What is the purpose of collaborative filtering in CDL?

- a: To make recommendations based on user-item interactions.
- b: To learn a latent representation of users and items.
- c: To predict user ratings.
- d: To extract features from item content information.

Correct Answer: c

Question 8: What type of data is CDL suitable for?

- a: Sparse rating data with auxiliary content information.
- b: Dense rating data with no auxiliary information.
- c: Structured data with no missing values.
- d: Unstructured data with no labels.

Correct Answer: a

Question 9: What is the main advantage of CDL over CTR?

- a: It can handle sparse auxiliary information.
- b: It requires less training data.
- c: It is more computationally efficient.
- d: It can make more accurate recommendations.

Correct Answer: a

Question 10: Which of the following is NOT a potential application of CDL?

- a: Recommender systems
- b: Fraud detection
- c: Image classification
- d: Natural language processing

Correct Answer: c