MCQ Assessment - For Students

Question 1: What is a common approach used by many recommender systems?

a: Collaborative filtering

b: Content-based filtering

c: Hybrid filtering

d: Rule-based filtering

Question 2: What is the main problem with conventional CF-based methods?

a: Data sparsity

b: Cold start

c: Overfitting

d: Scalability

Question 3: What additional information can be used to address the sparsity problem in CF-based methods?

a: Item content information

b: User demographics

c: Social network data

d: All of the above

Question 4: What is the name of the method that tightly couples learning from ratings and content information?

a: Collaborative topic regression (CTR)

b: Matrix factorization

c: Neighborhood-based methods

d: Deep autoencoders

Question 5: What is the main limitation of the latent representation learned by CTR?

a: It may not be effective when auxiliary information is sparse

b: It may overfit to the training data

c: It may not capture the semantic relationships between items

d: It may not generalize well to new data

Question 6: What is the main idea behind collaborative deep learning (CDL)?

a: Combining deep representation learning and collaborative filtering

b: Using deep learning to improve the accuracy of CF-based methods

c: Applying deep learning to non-i.i.d. input

d: Extracting meaningful features from content information

Question 7: What type of input data does CDL handle?

a: i.i.d. input

b: Non-i.i.d. input

c: Structured data

d: Unstructured data

Question 8: What is the main benefit of CDL over existing methods?

a: It can significantly advance the state of the art in recommender systems

b: It is more efficient and scalable

c: It is easier to implement

d: It does not require any auxiliary information

Question 9: In what domains have CDL experiments been conducted?

a: E-commerce

b: Movie recommendation

c: Music recommendation

d: All of the above

Question 10: What is the main purpose of deep representation learning in CDL?

a: To extract meaningful features from content information

b: To improve the accuracy of collaborative filtering

c: To reduce the dimensionality of the data

d: To generate new data samples