**Quiz 4 – Spring 2017**

**CS583: Data Ming and Text Mining**

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ UID\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
|  | **Marks** |
| Q1 |  |
| Q2 |  |
| Q3 |  |
| **Total** |  |

1. (10 marks) Answer the following questions. **Multiple answers may be correct** for each question.

a) Which of the following can be called an aspect in opinion mining?

1. A product feature
2. A person
3. A product
4. A positive opinion

b) Which of the following is an objective sentence with an opinion?

1. What a great car, it stopped working in the second day
2. I bought the phone yesterday and it stopped working today.
3. This is a beautiful phone
4. This phone is better than my old phone.

c) Content-based recommender systems recommend items based on:

1. The user’s interests or preferences in the past
2. The user’s interests or preferences in the future
3. People with similar tastes or preferences in the past
4. People with similar tastes or preferences in the future

d) Collaborative filtering (CF) recommender systems recommend items based on

1. The user’s interests or preferences in the past
2. The user’s interests or preferences in the future
3. People with similar tastes or preferences in the past
4. People with similar tastes or preferences in the future

e) Comparing items based on their pattern of ratings across users

1. The approach that uses the above idea is called item-based CF
2. The approach that uses the above idea is called user-based CF
3. The approach that uses the above idea is called integrated CF
4. The approach that uses the above idea is called user-item based CF
5. (10 marks) produce all opinion quintuples from the following review.

**Id: Abc123 on 5-1-2008 --** “*Yesterday, my boyfriend bought an iPhone and I* *bought a Motorola phone. We called each other when we got home. The voice quality of my phone was bad. My boyfriend was happy with his phone. He said the sound of his phone was super clear. I am disappointed with my phone.”*

1. (5 marks) Each set of numbers below represents a set of books bought by a customer.

{1, 4}

{1, 4, 5, 7}

{4, 5, 7, 3}

{5, 6}

{1, 4, 5, 6}

{4, 3}

{4, 3, 7}

{4, 3, 7}

If a customer has just purchased book 3, which book would you recommend him/her to buy next? Why? Please use association rule based recommendation to solve this problem.