NPTEL Online Certification Courses
Indian Institute of Technology Kharagpur

Recommender Systems

Assignment- Week 1

TYPE OF QUESTION: MCQ/MSQ

Number of questions: 20 **Total marks:**

QUESTION 1:

Long tail phenomena is a typical characteristic of recommender system datasets. The x-axis of this distribution is characterised by _____whereas the y-axis represents _____.

a) Product, Popularity
b) **Popularity, Product**
c) Popularity, Customer
d) Customer, Popularity

Correct Answer: b

Explanation: Refer to Week 1 Lecture 1 Slide 8

QUESTION 2:

Click-through rate is often used to measure the business value of a recommender system. This is based on the assumption that

a) Lower clicks lead to lower levels of user retention, which, in turn, reduces the cost to the company
b) Lower clicks lead to few but loyal customers, which, in turn, often directly translates into business value
c) More clicks lead to lower investment in customer relationship management, which, in turn, reduces the cost to the company
d) **More clicks indicate that the recommendations were more relevant for the users**

Correct Answer: d

Explanation: Refer to Week 1 Lecture 1 Slide 15

QUESTION 3:

Cold start problem arises when there is _____data to provide recommendations

a) **Lack of**
b) Large volume of
c) Misleading user
d) Misleading item

Correct Answer: a

Explanation: Refer to Week 1 Lecture 2 Slide 3

QUESTION 4:

Which of the following recommender systems exploits the concept of longtail phenomena while recommending items.

a) Content based
b) Collaborative filtering based
c) Context based
d) **Popularity based**

Correct Answer: d

Explanation: Refer to Week 1 Lecture 2 Slide 15

QUESTION 5:

In a user-user collaborative filtering system, the similarity between two users is computed using ____data.

a) Use demographics
b) Item description data
c) Rating matrix
d) All of the above

Correct Answer: c

Explanation: Refer to Week 1 Lecture 3 Slide 6

QUESTION 6:

The prediction accuracy of Trust-based recommendation systems is likely to improve as it uses both rating matrix and trust matrix to deal with _____ problem.

a) **Data sparsity**
b) Data integrity
c) User rating bias
d) Item trust bias

Correct Answer: a

Explanation: Refer to Week 1 Lecture 3 Slide 14

QUESTION 7:

Which of the following could be an example of implicit data in the context of a movie recommender system.

a) The text review created by the user
b) Feedback rating by the user after watching a movie.
c) **User rating derived from how much time is spent on a movie page**
d) All of the above

Correct Answer: c

Explanation: Refer to Week 1 Lecture 4 Slide 8

QUESTION 8:

A credit card company uses the *monthly expenditure* of a customer to decide the credit limit. The *monthly expenditure* is in which of the following scales of measurement?

a) Nominal
b) Ordinal
c) Interval
d) **Ratio**

Correct Answer: d

Explanation: Refer to Week 1 Lecture 4 Slide 11-18

QUESTION 9:

The middle line in a box plot represents _____ of the data.

a) IQR
b) Mean
c) Mode
d) **Median**.

Correct Answer: d

Explanation: Refer to Week 1 Lecture 5 Slide 10

QUESTION 10:

The diagonal entries in a covariance matrix represent

a) Mean
b) Correlation
c) Covariance
d) **Variances**

Correct Answer: d

Explanation: Refer to Week 1 Lecture 5 Slide 16

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