HS - 616 Questions week-wise

author: Lakshmi Arbatti

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Lecture 1a

If x <- 1:4 and y <- 5:8 what is the output of x + y ?

- A vector with values 6 8 10 12
- A numeric integer with value 6
- A numeric integer with values 6 8 10 12
- Running the statement gives an error

Lecture 1b

What is the class() of the vector 'var' in the statement var <- runif (10) < 0.5?

- Logical
- Integer
- Character
- List

Lecture 2a

Which of the following equation represents the sensitivity of a test?

- sensitivity = number of true positives / number with disease
- sensitivity = number of true negatives / number without disease
- sensitivity = number with disease / total population
- sensitivity = number of true positives / number of true negatives

Lecture 2b

Poisson Probability Distribution is a type of

- Discrete Probability Distribution
- Continuous Probability Distribution
- Cumulative distibution
- Random number generation

Lecture 3a

Given a matrix

```
x <- matrix (1:12,4,3)
x
```

what is the output of the statement **x[1,]**

- [1] 1 5 9
- [1] 1
- [1] 1 2 3 4
- System generates a syntax error

Lecture 3b

Given a matrix A

```
x <- matrix (1:12,4,3)
x
```

what is the output of A * Transpose(A)

- ```
  x <- matrix (1:12,4,3)
  trans <- t(x)
  x %*% trans
  ```

- `diag(nrow=4)`

- [1] 1 2 3 4

- System generates a syntax error

Lecture 4a

To find the square of each number from 1 to N, which of the following is the fastest approach

- x <- 1:N y <- x^2
- y <- numeric() for (i in 1:N) y[i] <- i^2
- y <- numeric(N) for (i in 1:N) y[i] <- i^2

Lecture 4b

Which of the following function keeps track of the function stack and tabulates how much time is spent on each function?

- RProf()
- runif()
- system.time()
- rnorm()

Lecture 5a

Which function in R is best suited to read very large data sets?

- read.table()
- read.csv()
- data.frame()
- None of the choices

Lecture 5b

What does the selectorGadget do?

- Allows you to interactively click on a web page and helps generate CSS selectors
- Generates data for a linear model
- Selects the best function in a given program
- Helps to select and time profiler functions

Lecture 6a

Which statement below best describes "natural join"?

- "natural join"" uses an obviously similar column for join.
- "natural join" keeps only records in first table
- "natural join" keeps only the information from second table if available
- SQL does not support natural join

Lecture 6b

In database management, what is meant by "Data Aggregation"?

- The process by which data is gathered and summarized for further statistical analyses
- Using an inner join to extract data from a table
- Normalizing the data in a database table
- Finding the mean of columns in a database table