5. Point out the wrong statement :  
a) matrices or more generally arrays are multi-dimensional generalizations of vectors  
b) factors provide compact ways to handle categorical data  
**c) vectors provide a convenient way to return the results of a statistical computation**  
d) All of the mentioned  
View Answer

6. Which of the following is invalid assignment ?  
a)

> x <- fact(c("yes", "yes", "no", "yes", "no"))

**b)**

**> x <- factor(c("yes", "yes", "no", "yes", "no"))**

c)

> x <- factor(factor("yes", "yes", "no", "yes", "no"))

d) None of the mentioned  
View Answer

What would be the output of the following code ?

> x <- vector("list", length = 5)

> x

**a) NULL**b) 1  
c) 0  
d) None of the mentioned  
View Answer

9. Which of the following code snippet will create a vector with NAs in it ?  
**a) x <- c(1, 2, NA, 10, 3)** b) x <- cNA(1, 2, NA, 10, 3) c) x <- NA(1, 2, NA, 10, 3) d) None of the mentioned [expand title="View Answer"]Answer:a Explanation:This returns a logical vector indicating which elements are NA.[/expand]

10.What would the following code print ?

> x <- c(1, 2, NaN, NA, 4)

> is.na(x)

**a) FALSE FALSE TRUE TRUE FALSE**b) FALSE TRUE TRUE TRUE FALSE  
c) TRUE FALSE TRUE TRUE FALSE  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Missing values are denoted by NA or NaN for q undefined mathematical operations.

2. Point out the wrong statement :  
a) is.nan() is used to test objects if they are NA  
b) is.nan() is used to test for NaN  
c) NA values have a class also, so there are integer NA, character NA, etc  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:A NaN value is also NA but the converse is not true.

3. Data frames can be converted to a matrix by calling data.\_\_\_\_\_\_\_  
a) matr()  
b) mat()  
c) matrix()  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:as.matrix() function should be used to coerce a data frame to a matrix.

4. What would the following code print ?

> x <- data.frame(foo = 1:4, bar = c(T, T, F, F))

> ncol(x)

a) 2  
b) 4  
c) 7  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Data frames are represented as a special type of list where every element of the list has to have the same length.

5. Point out the correct statement :  
a) Using factors with labels is better than using integers because factors are self-describing  
b) Factors are used to represent categorical data and can be unordered or ordered  
c) Factors are important in statistical modeling and are treated specially by modelling functions like lm() and glm()  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:Having a variable that has values “Male” and “Female” is better than a variable that has values 1 and 2.

6. Which of the following is invalid assignment ?  
a)

> x <- list("Los Angeles" = 1, Boston = 2, London = 3)

b)

> names(x) <- c("New York", "Seattle", "Los Angeles")

c)

> name(x) <- c("New York", "Seattle", "Los Angeles")

d) None of the mentioned  
View Answer

Answer:c  
Explanation:Lists can also have names, which is often very useful.

7. What would be the output of the following code ?

> x <- 1:3

> names(x)

a) NULL  
b) 1  
c) 2  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:R objects can have names, which is very useful for writing readable code and self-describing objects.

8. What would be the output of the following code ?

> m <- matrix(1:4, nrow = 2, ncol = 2)

> dimnames(m) <- list(c("a", "b"), c("c", "d"))

> m

a)

c d

a 1 3

b 2 4

b)

c d

a 1 2

b 2 3

c)

c d

a 1 3

b 4 2

d) All of the mentioned  
View Answer

Answer:a  
Explanation:Matrices can have both column and row names.

9. Which of the following statement changes column name to h and f ?  
a) colnames(m) <- c("h", "f") b) columnnames(m) <- c("h", "f") c) rownames(m) <- c("h", "f") d) None of the mentioned [expand title="View Answer"]Answer:a Explanation:Column names and row names can be set separately using the colnames() and rownames() functions.[/expand] 10.Which of the following is used for reading tabular data ? a) read.csv b) dget c) readLines d) None of the mentioned [expand title="View Answer"]Answer:a Explanation:read.table can also be used for reading dataset in structured form.[/expand] **Sanfoundry Global Education & Learning Series – R Programming Language.**

1. Which of the following is used for reading in saved workspaces ?  
a) unserialize  
b) load  
c) get  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:unserialize is used for reading single R objects in binary form.

2. Point out the wrong statement :  
a) write.table is used for for writing tabular data to text files (i.e. CSV) or connections  
b) writeLines is used for for writing character data line-by-line to a file or connection  
c) dump is used for for dumping a textual representation of multiple R objects  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:There are analogous functions for writing data to files.

3. \_\_\_\_\_\_\_\_ is used for outputting a textual representation of an R object  
a) dput  
b) dump  
c) dget  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:dump is used for dumping a textual representation of multiple R objects.

4. Which of the following argument denotes if the file has a header line ?  
a) header  
b) sep  
c) file  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:sep is a string indicating how the columns are separated.

5. Point out the correct statement :  
a) unserialize is used for converting an R object into a binary format for outputting to a connection  
b) save is used for saving an arbitrary number of R objects in binary format to a file  
c) The read.data() function is one of the most commonly used functions for reading data  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:read.table reads a file in table format and creates a data frame from it.

6. Which of the following statement would read file “foo.txt” ?  
a) data <- read.table("foo.txt") b) read.data <- read.table("foo.txt") c) data <- read.data("foo.txt") d) None of the mentioned [expand title="View Answer"]Answer:a Explanation:R will automatically skip lines that begin with a #.[/expand] 7. Which of the following function is identical to read.table ? a) read.csv b) read.data c) read.tab d) None of the mentioned [expand title="View Answer"]Answer:a Explanation:The read.csv() function is identical to read.table except that some of the defaults are set differently (like the sep argument).[/expand] 8. Which of the followin code would read 100 rows ? a) initial <- read.table("datatable.txt", nrows = 100) b) tabAll <- read.table("datatable.txt", colClasses = classes) c) initial <- read.table("datatable.txt", nrows = 99) d) All of the mentioned [expand title="View Answer"]Answer:a Explanation:You can use the Unix tool wc to calculate the number of lines in a file.[/expand] 9. What is the result of the following code ?

> y <- data.frame(a = 1, b = "a")

> dput(y)

a)

structure(list(a = 1, b = list(1L, .Label = "a", class = "factor")), .Names\

= c("a",

"b"), row.names = c(NA, -1L), class = "data.frame")

b)

list(list(a = 1, b = list(1L, .Label = "a", class = "factor")), .Names\

= c("a",

"b"), row.names = c(NA, -1L), class = "data.frame")

c)

structure(list(a = 1, b = structure(1L, .Label = "a", class = "factor")), .Names\

= c("a",

"b"), row.names = c(NA, -1L), class = "data.frame")

d) None of the mentioned  
View Answer

Answer:c  
Explanation:dput() output is in the form of R code and that it preserves metadata like the class of the object, the row names, and the column names.

10.Which of the following is used for reading tabular data ?

> y <- data.frame(a = 1, b = "a")

> dput(y, file = "y.R")

> new.y <- dget("y.R")

> new.y

a)

a b

1 1 a

b)

a b

1 2 b

c)

a b

2 1 a

d) None of the mentioned  
View Answer

Answer:a  
Explanation:Multiple objects can be deparsed at once using the dump function and read back in using source.

1. \_\_\_\_\_\_ let’s you perform SQL queries on your R data frames.  
a) sqldf  
b) plyr  
c) forecast  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:sqldf uses SQLite syntax.

2. \_\_\_\_\_\_ splits a data frame and results an array (hence the da). Hopefully you’re getting the idea here.  
a) apply  
b) daply  
c) stats  
View Answer

Answer:b  
Explanation:ddply splits a data frame and returns a data frame.

3. \_\_\_\_\_\_\_\_ makes it incredibly easy to fit time series models like ARIMA, ARMA, AR, Exponential Smoothing, etc.  
a) sqldf  
b) plyr  
c) forecast  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Most important feature is the resulting forecast plot.

4. \_\_\_\_\_\_\_\_ provides needed string operators in R.  
a) str  
b) forecast  
c) stringr  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:stringr is remarkably easy to use.

5. Which of the following syntax is used to install forecast package ?  
a) install.pack(“forecast”)  
b) install.packages(“cast”)  
c) install.packages(“forecast”)  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:forecast is used for time series analysis.

6. Which of the following convert a matrix of phi coefficients to polychoric correlations ?  
a) poly()  
b) qline()  
c) phi2poly  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:In statistics, polychoric correlation is a technique for estimating the correlation between two theorized normally distributed continuous latent variables, from two observed ordinal variables

7. Which of the following is used to plot multiple histograms ?  
a) multi.plot()  
b) multi.hist  
c) xyplot.multi()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:A histogram is a graphical representation of the distribution of numerical data.

8. Which of the following count the number of good cases when doing pairwise analysis ?  
a) count.pairwise  
b) count() +  
c) anova.para()  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Pairwise comparison generally is any process of comparing entities in pairs to judge which of each entity is preferred.

9. Which of the following gives the summary of values likes mean etc ?  
a) mean  
b) sd  
c) describe  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:describe give means, sd, skew, n, and se.

10.The purpose of correct.cor is to correct \_\_\_\_\_\_\_\_\_ in values.  
a) difference  
b) reliability  
c) error  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:Correlation matrix and a vector of reliabilities is given to correct reliability.

1. The IBM \_\_\_\_\_\_\_\_\_ analytics appliances combine high-capacity storage for Big Data with a massively-parallel processing platform for high-performance computing.  
a) Watson.  
b) Netezza  
c) InfoSight  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:With the addition of Revolution R Enterprise for IBM Netezza, you can use the power of the R language to build predictive models on Big Data.

2. \_\_\_\_\_\_ is an integrated hosted analytics platform for marketing insights, predictive models, and marketing optimization”  
a) LityxEQ  
b) WatSon  
c) LityxIQ  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:LityxIQ allows marketers to automate the loading and managing multiple data sources,automatically build and manage predictive models, and optimize marketing budget and media decisions.

3. \_\_\_\_\_\_\_\_ is rapidly being adopted for computing descriptive and query types of analytics on Big data.  
a) EDR  
b) Hadoop  
c) Azure  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:However, it has a reputation for not being a suitable environment for high performance complex iterative algorithms such as logistic regression, generalized linear models, and decision trees.

4. \_\_\_\_\_\_\_\_\_ involves predicting a response with meaningful magnitude, such as quantity sold, stock price, or return on investment.  
a) Regression  
b) Summarization  
c) Clustering  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Regression and classification are two common types predictive models.

5. Which of the following involves predicting a categorical response ?  
a) Regression  
b) Summarization  
c) Clustering  
d) Classification  
View Answer

Answer:d  
Explanation:Classification techniques are widely used in data mining to classify data.

6. Which of the following contains pre-built predictive tools ?  
a) alteryx  
b) fossilx  
c) paleoTS  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Alteryx Analytics, with deep integration of the R statistics and predictive language, offers a way to bridge these two worlds of ease of use and sophisticated predictive analytics.

8. Which of the following is preferred for text analytics ?  
a) R  
b) Python  
c) S  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:pandas is an open source, BSD-licensed library providing high-performance, easy-to-use data structures and data analysis tools for the Python programming.

9. \_\_\_\_\_\_ is simplest class of analytics.  
a) Descriptive  
b) Predictive  
c) Prescriptive  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Predictive analytics can only forecast what might happen in the future, because all predictive analytics are probabilistic in nature.

10.\_\_\_\_\_\_\_\_\_ is a JavaScript charting library and feature-rich API set that lets you build interactive Flash or HTML5 charts.  
a) InstantAtlas  
b) Alterian  
c) ZingChart  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:ZingChart lets you create HTML5 Canvas charts and more.

This set of R Programming Language Multiple Choice Questions & Answers (MCQs) focuses on “Connection Interfaces”.

1. Individual R objects can be saved to a file using the \_\_\_\_\_ function.  
a) save  
b) put  
c) save\_image  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:The key functions for converting R objects into a binary format are save(), save.image(), and serialize().

2. Point out the correct statement :  
a) The complement to the textual format is the binary format  
b) If you have a lot of objects that you want to save to a file, you can save all objects in your workspace using the save.image() function  
c) The serialize() function is used to convert individual R objects into a binary format that can be communicated across an arbitrary connection.  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:It’s better to stick with a binary format for efficiency and accuracy.

3. Which of the following statement will save the output to the file for following code ?

> a <- data.frame(x = rnorm(100), y = runif(100))

> b <- c(3, 4.4, 1 / 3)

a) save(a, b, file = “mydata.rda”)  
b) save\_image(a, b, file = “mydata.rda”)  
c) keep(a, b, file = “mydata.rda”)  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:You can save all objects in your workspace using the save.image() function.

4. Which of the following statement will load the objects to the file named “mydata.RData” ?  
a) save(“mydata.RData”)  
b) load(“mydata.RData”)  
c) loadAll(“mydata.RData”)  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:.rda and .RData are fairly common extensions and you may want to use them because they are recognized by other software.

5. Point out the wrong statement :  
a) When you call unserialize() on an R object, the output will be a raw vector coded in hexadecimal format  
b) serialize() function is the only way to perfectly represent an R object in an exportable format  
c) .rda extension is used when save() function is incorporated  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Output may get sent to a file, but it could get sent over a network or other connection.

6. \_\_\_\_\_\_\_\_ opens a connection to a file compressed with gzip.  
a) url  
b) gzfile  
c) bzfile  
d) file  
View Answer

Answer:b  
Explanation:”file” opens a connection to a file.

7. Connections to text files can be created with the \_\_\_\_\_\_\_\_ function.  
a) url  
b) gzfile  
c) bzfile  
d) file  
View Answer

Answer:d  
Explanation:The file() function has a number of arguments that are common to many other connection functions.

8. Which of the followin code creates a connection to ‘foo.txt’ ?  
a) con <- file("foo.txt") b) open(con, "r") c) opencon(con, "r") d) All of the mentioned [expand title="View Answer"]Answer:a Explanation:Open is used for opening connection to 'foo.txt' in read-only mode.[/expand] 9. Which of the following code opens a connection to the file foo.txt, reads from it, and closes the connection when its done ? a) data <- read.csv("foo.txt") b) data <- read.csvo("foo.txt") c) data <- readonly.csv("foo.txt") d) None of the mentioned [expand title="View Answer"]Answer:a Explanation:Connections must be opened, then the are read from or written to, and then they are closed.[/expand] 10.Which of the following opens connection to gz-compressed text file ? a) con <- gzfiles("words.gz") b) con <- gzfile("words.gz") c) con <- gzfile2("words.gz") d) None of the mentioned [expand title="View Answer"]Answer:b Explanation:For more structured text data like CSV files or tab-delimited files, there are other functions like read.csv() or read.table().[/expand] **Sanfoundry Global**

1. Which of the following extracts first element from the following vector ?

> x <- c("a", "b", "c", "c", "d", "a")

a) x[10] b) x[1] c) x[0] d) None of the mentioned  
View Answer

Answer:b  
Explanation:Vectors are basic objects in R and they can be subsetted using the [ operator.

2. Point out the correct statement :  
a) There are three operators that can be used to extract subsets of R objects  
b) The [ operator is used to extract elements of a list or data frame by literal name  
c) The [[ operator is used to extract elements of a list or data frame by string name  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Three operators are [,[[ and $.

3. Which of the following extracts first four element from the following vector ?

> x <- c("a", "b", "c", "c", "d", "a")

a) x[0:4] b) x[1:4] c) x[0:3] d) All of the mentioned  
View Answer

Answer:b  
Explanation:The [ operator can be used to extract multiple elements of a vector by passing the operator an integer sequence.

4. What would be the output of the following code ?

> x <- c("a", "b", "c", "c", "d", "a")

> x[c(1, 3, 4)]

a) “a” “b” “c”  
b) “a” “c” “c”  
c) “a” “c” “b”  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The sequence does not have to be in order; you can specify any arbitrary integer vector.

5. Point out the wrong statement :  
a) $ operator semantics are similar to that of [[  
b) The [ operator always returns an object of the same class as the original  
c) The $ operator is used to extract elements of a list or a data frame  
d) All of the mentioned  
View Answer

Answer:C  
Explanation:The [[ operator is used to extract elements of a list or a data frame.It can only be used to extract a single element and the class of the returned object will not necessarily be a list or data frame.

6. What would be the output of the following code ?

> x <- matrix(1:6, 2, 3)

> x[1, 2]

a) 3  
b) 2  
c) 1  
d) 0  
View Answer

Answer:a  
Explanation:Matrices can be subsetted in the usual way with (i,j) type indices.

7. What would be the output of the following code ?

> x <- matrix(1:6, 2, 3)

> x[1, ]

a) 1 3 5  
b) 2 3 5  
c) 3 3 5  
d) file  
View Answer

Answer:a  
Explanation:Indices can also be missing.

8. Which of the followin code extracts the second column for the following matrix ?

> x <- matrix(1:6, 2, 3)

a) x[2, ] b) x[1, 2] c) x[, 2] d) All of the mentioned  
View Answer

Answer:c  
Explanation:This behavior is used to access entire rows or columns of a matrix.

9. What would be the output of the following code ?

> x <- matrix(1:6, 2, 3)

> x[1, , drop = FALSE]

a)

[,1] [,2] [,3]

[1,] 1 3 5

b)

[,1] [,2] [,3]

[1,] 2 3 5

c)

[,1] [,2] [,3]

[1,] 1 2 5

d) None of the mentioned  
View Answer

Answer:a  
Explanation:By default, when a single element of a matrix is retrieved, it is returned as a vector of length 1 rather than a $1\times 1$ matrix.

10.What would be the output of the following code ?

> x <- list(foo = 1:4, bar = 0.6)

> x

a)

$foo

[1] 1 2 3 4

$bar

[1] 0.6

b)

$foo

[1] 0 1 2 3 4

$bar

[1] 0 0.6

c)

$foo

[1] 0 1 2 3 4

$bar

[1] 0.6

d) None of the mentioned  
View Answer

Answer:a  
Explanation:The [[ operator can be used to extract single elements from a list.

1. Which of the following extracts first element from the following list ?

> x <- list(foo = 1:4, bar = 0.6)

a) x[[1]] b) x[1] c) x[[0]] d) None of the mentioned  
View Answer

Answer:a  
Explanation:The [[ operator can also use named indices so that you don’t have to remember the exact ordering of every element of the list.

2. Point out the correct statement :  
a) You can also use the $ operator to extract elements by name  
b) $ operator can be used with computed indices  
c) The [[ operator can only be used with literal names  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:You don’t need the quotes when you use the $ operator.

3. What would be the output of the following code ?

> x <- list(foo = 1:4, bar = 0.6, baz = "hello")

> name <- "foo"

> x$name

a) 1  
b) 2  
c) 3  
d) NULL  
View Answer

Answer:b  
Explanation:Element “name” doesn’t exist.

4. What would be the output of the following code ?

> x <- list(foo = 1:4, bar = 0.6, baz = "hello")

> name <- "foo"

> x[[name]]

a) 1 2 3 4  
b) 0 1 2 3  
c) 1 2 3 4 5  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:One thing that differentiates the [[ operator from the $ is that the [[ operator can be used with computed indices.

5. Point out the wrong statement :  
a) $ operator semantics are similar to that of [[  
b) The [[ operator can take an integer sequence if you want to extract a nested element of a list  
c) The $ operator can be used to extract multiple elements from a list  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:The [ operator can be used to extract multiple elements from a list.

6. What would be the output of the following code ?

> x <- list(a = list(10, 12, 14), b = c(3.14, 2.81))

> x[[c(1, 3)]]

a) 13  
b) 14  
c) 15  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The [[ operator can take an integer sequence if you want to extract a nested element of a list.

7. What would be the output of the following code ?

> x <- list(aardvark = 1:5)

> x$a

a) 1 2 3 4 5  
b) 2 3 5  
c) 1 3 3 5  
d) 1 2 3  
View Answer

Answer:a  
Explanation:Partial matching of names is allowed with [[ and $.

8. Which of the followin code extracts 1st element of the 2nd element ?

> x <- list(a = list(10, 12, 14), b = c(3.14, 2.81))

a) x[[c(2, 1)]] b) x[[c(1, 2)]] c) x[[c(2, 1,1)]] d) All of the mentioned  
View Answer

Answer:a  
Explanation:[ operator always returns an object of the same class as the original.

9. What would be the output of the following code ?

> x <- list(aardvark = 1:5)

> x[["a", exact = FALSE]]

a) 1 2 3 4 5  
b) 2 3 5  
c) 1 3 3 5  
d) 1 2 3  
View Answer

Answer:a  
Explanation:This is often very useful during interactive work if the object you’re working with has very long element names.

10.What would be the output of the following code ?

> x <- c(1, 2, NA, 4, NA, 5)

> bad <- is.na(x)

> print(bad)

a) FALSE FALSE FALSE FALSE TRUE FALSE  
b) FALSE TRUE TRUE FALSE TRUE FALSE  
c) FALSE FALSE TRUE FALSE TRUE FALSE  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:A common task in data analysis is removing missing values (NAs).

1. Which of the following is example of vectorized operation as far as subtraction is concerned ?

> x <- 1:4

> y <- 6:9

a) x+y  
b) x-y  
c) x/y  
d) x–y  
View Answer

Answer:b  
Explanation:Subtraction, multiplication and division are also vectorized.

2. Point out the wrong statement :  
a) Very less operations in R are vectorized  
b) Vectorization allows you to write code that is efficient, concise, and easier to read than in non-vectorized languages  
c) vectorized means that operations occur in parallel in certain R objects  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Many operations in R are vectorized.

3. What would be the output of the following code ?

> x <- 1:4

> y <- 6:9

> z <- x + y

> z

a) 7 9 11 13  
b) 7 9 11 13 14  
c) 9 7 11 13  
d) NULL  
View Answer

Answer:a  
Explanation:This is simplest example of adding two vectors together.

4. What would be the output of the following code ?

> x <- 1:4

> x > 2

a) 1 2 3 4  
b) FALSE FALSE TRUE TRUE  
c) 1 2 3 4 5  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Another operation you can do in a vectorized manner is logical comparisons.

5. Point out the wrong statement :  
a) Dates are represented by the Date class  
b) Times are represented by the POSIXct or the POSIXlt class  
c) Dates are represented by the DateTime class  
d) All of the mentioned  
View Answer

Answer:C  
Explanation:Dates are stored internally as the number of days since 1970-01-01 while times are stored internally as the number of seconds since 1970-01-01.

6. What would be the output of the following code ?

> x <- 1:4

> y <- 6:9

> x/y

a) 0.1666667 0.2857143 0.4444444  
b) 0.1666667 0.2857143 0.3750000 0.4444444  
c) 0.2857143 0.3750000 0.4444444  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Logical operations return a logical vector of TRUE and FALSE.

7. What would be the output of the following code ?

> x <- matrix(1:4, 2, 2)

> y <- matrix(rep(10, 4), 2, 2)

> x \* y

a)

[,1] [,2]

[1,] 10 30

[2,] 20 40

b)

[,1] [,2]

[1,] 10 30

[2,] 30 40

c)

[,1] [,2]

[1,] 20 30

[2,] 20 40

d) All of the mentioned  
View Answer

Answer:a  
Explanation:Matrix operations are also vectorized, making for nicely compact notation.

8. Which of the followin code represents internal representation of a Date object ?  
a) class(as.Date(“1970-01-02”))  
b) unclass(as.Date(“1970-01-02”))  
c) unclassint(as.Date(“1970-01-02”))  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:You can see the internal representation of a Date object by using the unclass() function.

9. What would be the output of the following code ?

> x <- as.Date("1970-01-01")

> x

a) “1970-01-01”  
b) “1970-01-02”  
c) “1970-02-01”  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Dates are represented by the Date class and can be coerced from a character string using the as.Date() function.

10. What would be the output of the following code ?

> x <- Sys.time()

> class(x)

a) “POSIXct” “POSIXt”  
b) “POSIXXt” “POSIXt”  
c) “POSIXct” “POSIct”  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Times can be coerced from a character string using the as.POSIXlt or as.POSIXct function.

This set of R Programming Interview Questions and Answers for experienced focuses on “Vectorized Operations”

1. Which of the following function gives the day of the week ?  
a) weekdays  
b) months  
c) quarters  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:months function give the month name.

2. Point out the correct statement :  
a) Times use the POSIXct and POSIXlt class  
b) Dates and times have special classes in R that allow for numerical and statistical calculations  
c) Character strings can be coerced to Date/Time classes using the strptime function  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:Character strings can be coerced to Date/Time classes using the as.Date, as.POSIXlt, or as.POSIXct.

3. What would be the output of the following code ?

> p <- as.POSIXlt(x)

> names(unclass(p))

> p$wday

a) 1  
b) 2  
c) 3  
d) NULL  
View Answer

Answer:a  
Explanation:The POSIXlt object contains some useful metadata.

4. What would be the output of the following code ?

> datestring <- c("January 10, 2012 10:40", "December 9, 2011 9:10")

> x <- strptime(datestring, "%B %d, %Y %H:%M")

> x

a) “2012-01-10 10:40:00 EST” “2011-12-09 09:10:00 EST”  
b) “2012-01-10 10:40:00 IST” “2011-12-09 09:10:00 IST”  
c) “2012-01-10 10:40:00 GMT” “2011-12-09 09:10:00 GMT”  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:strptime() takes a character vector that has dates and times and converts them into to a POSIXlt object.

5. Point out the wrong statement :  
a) POSIXct is just a very large integer under the hood  
b) POSIXlt stores a bunch of other useful information like the day of the week, day of the year, month, day of the month  
c) There are a number of generic functions that work on dates and times to help you extract pieces of dates and/or times  
d) None of the mentioned  
View Answer

Answer:d  
Explanation:POSIXct uses a useful class when you want to store times in something like a data frame.

6. What would be the output of the following code ?

> x <- as.Date("2012-01-01")

> y <- strptime("9 Jan 2011 11:34:21", "%d %b %Y %H:%M:%S")

> x-y

a) Time difference of 356.3095 days  
b) Warning  
c) NULL  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:You can use mathematical operations on dates and times.

7. What would be the output of the following code ?

> x <- as.Date("2012-03-01")

> y <- as.Date("2012-02-28")

> x-y

a) Time difference of 3 days  
b) Time difference of 2 days  
c) Time difference of 1 days  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Matrix operations are also vectorized, making for nicely compact notation.

8. Which of the followin code represents internal representation of a Date object ?  
a) class(as.Date(“1970-01-02”))  
b) unclass(as.Date(“1970-01-02”))  
c) unclassint(as.Date(“1970-01-02”))  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Date/time classes is that they keep track of all the annoying things about dates and times, like leap years, leap seconds, daylight savings, and time zones..

9. What would be the output of the following code ?

> x <- as.POSIXct("2012-10-25 01:00:00")

> y <- as.POSIXct("2012-10-25 06:00:00", tz = "GMT")

> y-x

a) Time difference of 1 hour  
b) Time difference of 1 min  
c) Time difference of 1 sec  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:POSIXct is just a very large integer under the hood.

10.What would be the output of the following code ?

> x <- matrix(1:4, 2, 2)

> y <- matrix(rep(10, 4), 2, 2)

> x %\*% y

a)

[,1] [,2]

[1,] 40 40

[2,] 60 60

b)

[,1] [,2]

[1,] 40 40

[2,] 80 60

c)

[,1] [,2]

[1,] 40 60

[2,] 60 60

d) None of the mentioned  
View Answer

Answer:a  
Explanation:We can do element-by-element operations on matrices without having to loop over every element.

This set of R Programming Language Multiple Choice Questions & Answers (MCQs) focuses on “dplyr-1”.

1. Which of the following return a subset of the columns of a data frame ?  
a) select  
b) retrieve  
c) get  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:One important contribution of the dplyr package is that it provides a “grammar” for data manipulation and for operating on data frames.

2. Point out the correct statement :  
a) The data frame is a key data structure in statistics and in R  
b) R has an internal implementation of data frames that is likely the one you will use most often  
c) There are packages on CRAN that implement data frames via things like relational databases that allow you to operate on very very large data frames  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:The basic structure of a data frame is that there is one observation per row and each column represents a variable, a measure, feature, or characteristic of that observation.

3. \_\_\_\_\_\_\_\_\_ extract a subset of rows from a data frame based on logical conditions.  
a) rename  
b) filter  
c) set  
d) subset  
View Answer

Answer:a  
Explanation:rename is used to rename variables in a data frame.

4. \_\_\_\_\_\_\_\_\_ generate summary statistics of different variables in the data frame, possibly within strata  
a) rename  
b) summarize  
c) set  
d) subset  
View Answer

Answer:b  
Explanation:The dplyr package as a number of its own data types that it takes advantage of.

5. Point out the wrong statement :  
a) The dplyr package was developed by Hadley Wickham of RStudio  
b) The dplyr packageis an optimized and distilled version of his plyr package  
c) The dplyr package provideS any “new” functionality to R  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:The dplyr package does not provide any “new” functionality to R.

6. \_\_\_\_\_\_\_\_ add new variables/columns or transform existing variables  
a) mutate  
b) add  
c) apped  
d) arrange  
View Answer

Answer:a  
Explanation:arrange is used to reorder rows of a data frame.

7. The \_\_\_\_\_\_\_ operator is used to connect multiple verb actions together into a pipeline  
a) pipe  
b) piper  
c) start  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:It is denoted by %>% sign.

8. The dplyr package can be installed from GitHub using the \_\_\_\_\_\_\_ package  
a) dev  
b) devtools  
c) devtool  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The GitHub repository will usually contain the latest updates to the package and the development version.

9. The dplyr package can be installed from CRAN using :  
a) installall.packages(“dplyr”)  
b) install.packages(“dplyr”)  
c) installed.packages(“dplyr”)  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:After installing the package it is important that you load it into your R session with the library() function.

10.Which of the following object is masked from ‘package:stats’ ?  
a) filter  
b) union  
c) setdifference  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:The following objects are masked from ‘package:base’: intersect, setdiff, setequal, union.

This set of R Programming Test focuses on “dplyr Basics”.

1. The \_\_\_\_\_\_\_\_\_ function can be used to select columns of a data frame that you want to focus on.  
a) select  
b) rename  
c) get  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:The select() function allows you to get the few columns you might need.

2. Point out the correct statement :  
a) You can also omit variables using the select() function by using the negative sign  
b) The arrange() function also allows a special syntax that allows you to specify variable names based on patterns  
c) Reordering rows of a data frame is normally easier to do in R  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:The arrange() function is used to reorder rows of a data frame according to one of the variables/columns.

3. \_\_\_\_\_\_\_\_ function is similar to the existing subset() function in R but is quite a bit faster.  
a) rename  
b) filter  
c) set  
d) subset  
View Answer

Answer:b  
Explanation:The filter() function is used to extract subsets of rows from a data frame.

4. Columns can be arranged in descending order too by using the special \_\_\_\_ operator.  
a) asc()  
b) desc()  
c) descending()  
d) subset  
View Answer

Answer:b  
Explanation:This will sort the order in decreasing order.

5. Point out the wrong statement :  
a) Renaming a variable in a data frame in R is surprisingly hard to do  
b) The mutate() function exists to compute transformations of variables in a data frame  
c) mute() function, which does the same thing as mutate() but then drops all non-transformed variables  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:The rename() function is designed to make this process easier.

6. The \_\_\_\_\_\_\_\_\_ function is used to generate summary statistics from the data frame within strata defined by a variable.  
a) groupby()  
b) group()  
c) group\_by()  
d) arrange  
View Answer

Answer:c  
Explanation:The general operation here is a combination of splitting a data frame into separate pieces defined by a variable or group of variables (group\_by()), and then applying a summary function across those subsets (summarize()).

7. The \_\_\_\_\_\_ operator allows you to string operations in a left-to-right fashion.  
a) %>%>  
b) %>%  
c) >%>%  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The pipeline operator %>% is very handy for stringing together multiple dplyr functions in a sequence of operations.

8. There is an SQL interface for relational databases via the \_\_\_\_\_\_\_ package.  
a) DIB  
b) DB2  
c) DBI  
d) All of the mentioned  
View Answer

9. dplyr can be integrated with the \_\_\_\_\_\_\_\_ package for large fast tables.  
a) data.table  
b) read.table  
c) data.data  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:The dplyr package is handy way to both simplify and speed up your data frame management code.

10.Which of the following function is similar to summarize ?  
a) arrange\_by()  
b) group()  
c) group\_by()  
d) arrange  
View Answer

Answer:c  
Explanation:The dplyr package provides a concise set of operations for managing data frames.

1. Which of the following is valid syntax for if else statement in R ?  
a)

if(<condition>) {

## do something

}

else {

## do something else

}

b)

if(<condition>) {

## do something

}

elseif {

## do something else

}

c)

if(<condition>) {

## do something

}

else if {

## do something else

}

d) All of the mentioned  
View Answer

Answer:a  
Explanation:If you have an action you want to execute when the condition is false, then you need an else clause.

2. Point out the correct statement :  
a) Blocks are evaluated until a new line is entered after the closing brace  
b) Single statements are evaluated when a new line is typed at the start of the syntactically complete statement  
c) The if/else statement conditionally evaluates two statements  
d) All of the mentioned  
View Answer

3. Which of the following syntax is correct for while loop ?  
a) while ( statement1 ) statement2  
b) while ( statement1 ) else statement2  
c) while ( statement1 ) do statement2  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:The while statement is very similar to the repeat statement.

4. Which of the following code generate a uniform random number ?  
a)

x <- runif(1, 0, 10)

if(x > 3) {

y <- 10

} else {

y <- 0

}

b)

x <- run(1, 0, 10)

if(x > 3) {

y <- 10

} else {

y <- 0

}

c)

x <- random(1, 0, 10)

if(x > 3) {

y <- 10

} else {

y <- 0

}

d) All of the mentioned  
View Answer

Answer:a  
Explanation:The value of y is set depending on whether x > 3 or not.

5. Point out the wrong statement :  
a) for will execute a loop a fixed number of times  
b) break will execute a loop while a condition is true  
c) if and else tests a condition and acting on it  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:The if-else structure allows you to test a condition and act on it depending on whether it’s true or false.

6. \_\_\_\_\_\_\_ is used to break the execution of a loop.  
a) next  
b) skip  
c) break  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Control structures allow you to respond to inputs or to features of the data and execute different R expressions accordingly.

7. Which of the following code generate a sequence of integers from 1 to 10 ?  
a)

> for(i in 1:9) {

+ print(i)

+ }

[1]

b)

> for(i in 0:9) {

+ print(i)

+ }

[1]

c)

> for(i in 1:10) {

+ print(i)

+ }

[1]

d) All of the mentioned  
View Answer

Answer:c  
Explanation:In R, for loops take an iterator variable and assign it successive values from a sequence or vector.

8. Which of the following statement can be used to explicitly control looping ?  
a) if  
b) while  
c) break  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:The break statement causes an exit from the innermost loop that is currently being executed.

9. Which of the following should be preferred for evaluation from list of alternatives ?  
a) subsett  
b) eval  
c) switch  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:eval(x[[condition]]) is the best way to select one for evaluation.

10.What will be the output of the following code ?

> x <- c("a", "b", "c", "d")

> for(i in 1:4) {

+ ## Print out each element of 'x'

+ print(x[i])

+ }

a)

[1] "a"

[1] "b"

[1] "c"

[1] "d"

b)

[1] "c"

[1] "b"

[1] "a"

[1] "d"

c)

[1] "d"

[1] "c"

[1] "b"

[1] "a"

d) All of the mentioned  
View Answer

Answer:a  
Explanation:The above code print out each element of ‘x’.

1. Which of the following code skips the first 20 iterations ?  
a)

for(i in 1:100) {

if(i <= 20) {

next

}

}

b)

for(i in 1:100) {

if(i <= 19) {

next

}

}

c)

for(i in 1:100) {

if(i <= 21) {

next

}

}

d) All of the mentioned  
View Answer

Answer:a  
Explanation:next is used to skip an iteration of a loop.

2. Point out the correct statement :  
a) The only way to exit a repeat loop is to call break  
b) Infinite loops should generally be avoided  
c) Control structures like if, while, and for allow you to control the flow of an R program  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:Control structures are primarily useful for writing programs; for commandline interactive work.

3. \_\_\_\_\_\_\_\_\_ initiates an infinite loop right from the start.  
a) never  
b) repeat  
c) break  
d) set  
View Answer

Answer:b  
Explanation:These are not commonly used in statistical or data analysis applications but they do have their uses.

4. Which of the following code snippet stops loop after 20 iterations ?  
a)

for(i in 1:100) {

print(i)

if(i > 20) {

break

}

}

b)

for(i in 1:100) {

print(i)

if(i > 19) {

break

}

}

c)

for(i in 1:100) {

print(i)

if(i < 20) {

break

}

}

d) All of the mentioned  
View Answer

Answer:a  
Explanation:break is used to exit a loop immediately, regardless of what iteration the loop may be on.

5. Point out the wrong statement :  
a) Statements cannot be grouped together using braces ‘{’ and ‘}’  
b) Computation in R consists of sequentially evaluating statements  
c) Single statements are evaluated when a new line is typed at the end of the syntactically complete statement  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Blocks are not evaluated until a new line is entered after the closing brace.

6. \_\_\_\_\_\_\_ is used to skip an iteration of a loop.  
a) next  
b) skip  
c) group  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:No statement below next in the current loop is evaluated.

7. Which of the following code can be used to avoid numeric problems such as taking the logarithm of a negative number ?  
a)

if( any(x < 0) ) y <- log(1+x) else y <- log(x)

b)

if( any(x <= 0) ) y <- log(1+x) else y <- log(x)

c)

if( any(x >= 0) ) y <- log(1+x) else y <- log(x)

d) All of the mentioned  
View Answer

Answer:b  
Explanation:The else clause is optional. The statement if(any(x <= 0)) x <- x[x <= 0] is valid.[/expand] 8. R has \_\_\_\_\_\_\_\_ statements that provide explicit looping. a) two b) three c) four d) All of the mentioned [expand title="View Answer"]Answer:b Explanation:They are for, while and repeat.[/expand] 9. The syntax of the repeat loop is : a) rep statement b) repeat statement c) repeat else d) None of the mentioned [expand title="View Answer"]Answer:b Explanation:The repeat statement causes repeated evaluation of the body until a break is specifically requested.[/expand] 10.Which will be the output of following code ?

> x <- 3

> switch(x, 2+2, mean(1:10), rnorm(5))

a) 2.2903605 2.3271663 -0.7060073 1.3622045 -0.2892720  
b) 5.5  
c) NULL  
d) All of the mentioned  
View AnswerAnswer:a

1. What will be the output of the following code ?

> x <- 3

> switch(2, 2+2, mean(1:10), rnorm(5))

a) 5  
b) 5.5  
c) NULL  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:If value is a number between 1 and the length of list then the corresponding element of list is evaluated and the result returned.

2. Point out the correct statement :  
a) Statements, such as x<-1:10 or mean(y), can be separated by either a semi-colon or a new line b) Whenever the evaluator is presented with a syntactically complete statement that statement is evaluated and the value returned c) Computation in R consists of sequentially evaluating statements d) All of the mentioned [expand title="View Answer"]Answer:d Explanation:Both semicolons and new lines can be used to separate statements.[/expand] 3.Which will be the output of following code ?

> x <- 3

> switch(6, 2+2, mean(1:10), rnorm(5))

a) 10  
b) 1  
c) NULL  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:If value is too large or too small NULL is returned.

4. What will be the output of the following code ?

> y <- "fruit"

> switch(y, fruit = "banana", vegetable = "broccoli", "Neither")

a) “banana”  
b) “Neither”  
c) “broccoli”  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:If value is a character vector then the element of ‘…’ with a name that exactly matches value is evaluated.

5. Point out the correct statement :  
a) The next statement causes an exit from the innermost loop that is currently being executed  
b) There are two statements that can be used to explicitly control looping  
c) The break statement immediately causes control to return to the start of the loop  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:They are break and next.

6. What will be the output of the following code ?

> centre <- function(x, type) {

+ switch(type,

+ mean = mean(x),

+ median = median(x),

+ trimmed = mean(x, trim = .1))

+ }

> x <- rcauchy(10)

> centre(x, "mean")

a) 0.8760325  
b) 0.5360891  
c) 0.6086504  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:A common use of switch is to branch according to the character value of one of the arguments to a function.

7. Which of the following code will print “Neither” ?  
a)

> y <- "meat"

> switch(y, fruit = "banana", vegetable = "broccoli", "Neither")

b)

> y <- "brocolli"

> switch(y, fruit = "banana", vegetable = "broccoli", "Neither")

c)

> y <- "banana"

> switch(y, fruit = "banana", vegetable = "broccoli", "Neither")

d) All of the mentioned  
View Answer

Answer:a  
Explanation:If there is no match a single unnamed argument will be used as a default.

8. R has \_\_\_\_\_\_\_\_ basic indexing operators.  
a) two  
b) three  
c) four  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:R contains several constructs which allow access to individual elements or subsets through indexing operations.

9. The syntax of the for loop is :  
a)

for ( $name in vector )

statement1

b)

for loop( name in vector )

statement1

c)

for ( name in vector )

statement1

d) None of the mentioned  
View Answer

Answer:c  
Explanation:For each element in vector the variable name is set to the value of that element and statement1 is evaluated.

10.Which of the following code syntax is syntactically valid ?  
a)

if ( statement1 ) {

statement2

} else if ( statement3 ) {

statement4

} else if ( statement5 ) {

statement6

} else

statement8

b)

if ( statement1 ) {

statement2

} elseif ( statement3 ) {

statement4

} elseif ( statement5 ) {

statement6

} else

statement8

c)

if ( statement1 ) {

statement2

} elseif ( statement3 ) {

statement4

} else if ( statement5 ) {

statement6

} else

statement8

d) All of the mentioned  
View Answer

Answer:a  
Explanation: If the optional else clause is omitted and all the odd numbered statements evaluate to FALSE no statement will be evaluated and NULL is returned.

1. Which of the following is apply function in R ?  
a) apply()  
b) tapply()  
c) fapply()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Functions can be passed as arguments to other functions.

2. Point out the correct statement :  
a) Writing functions is a core activity of an R programmer  
b) Functions are often used to encapsulate a sequence of expressions that need to be executed numerous times  
c) Functions are also often written when code must be shared with others or the public  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:It represents the key step of the transition from a mere “user” to a developer who creates new functionality for R.

3.Functions are defined using the \_\_\_\_\_\_\_\_\_ directive and are stored as R objects  
a) function()  
b) funct()  
c) functions()  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:In particular, they are R objects of class “function”.

4. What will be the output of the following code ?

> f <- function() {

+ ## This is an empty function

+ }

> f()

a) 0  
b) No result  
c) NULL  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:This function takes no arguments and does nothing.

5. Point out the wrong statement :  
a) Functions in R are “second class objects”  
b) The writing of a function allows a developer to create an interface to the code, that is explicitly specified with a set of parameters  
c) Functions provides an abstraction of the code to potential users  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Functions in R are “first class objects”, which means that they can be treated much like any other R object.

6. What will be the output of the following code ?

> f <- function() {

+ ## This is an empty function

+ }

> class(f)

a) “function”  
b) “class”  
c) “procedure”  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Functions have their own class.

7. Which of the following code will print “Hello, world!” ?  
a)

> f <- function() {

+ cat("Hello, world!\n")

+ }

> f()

b)

> f <- function() {

+ cat("Hello, World!\n")

+ }

> f()

c)

> f <- function() {

+ cat("Hello world!\n")

+ }

> f()

d) All of the mentioned  
View Answer

Answer:a  
Explanation:This function has a non-trivial function body.

8. What will be the output of following code ?

> f <- function(num) {

+ for(i in seq\_len(num)) {

+ cat("Hello, world!\n")

+ }

+ }

> f(3)

a)

Hello, world!

Hello, world!

b)

Hello, world!

Hello, world!

Hello, world!

c)

Hello, world!

d) All of the mentioned  
View Answer

Answer:b  
Explanation:In general, if you find yourself doing a lot of cutting and pasting, that’s usually a good sign that you might need to write a function.

9. The syntax of the for loop is :  
a)

for ( $name in vector )

statement1

b)

for loop( name in vector )

statement1

c)

for ( name in vector )

statement1

d) None of the mentioned  
View Answer

Answer:c  
Explanation:For each element in vector the variable name is set to the value of that element and statement1 is evaluated.

10.What will be the output of following code ?

> f <- function(num) {

+ hello <- "Hello, world!\n"

+ for(i in seq\_len(num)) {

+ cat(hello)

+ }

+ chars <- nchar(hello) \* num

+ chars

+ }

> meaningoflife <- f(3)

> print(meaningoflife)

a) 32  
b) 42  
c) 52  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:This function returns the total number of characters printed to the console.

1. What will be the output of following code snippet ?

> paste("a", "b", se = ":")

a) “a+b”  
b) “a=b”  
c) “a b :”  
d) None of the mentioned  
View Answer

Answer:d  
Explanation:With the paste() function, the arguments sep and collapse must be named explicitly and in full if the default values are not going to be used.

2. Point out the correct statement :  
a) In R, a function is an object which has the mode function  
B) R interpreter is able to pass control to the function, along with arguments that may be necessary for the function to accomplish the actions that are desired  
c) Functions are also often written when code must be shared with others or the public  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:An argument list is a comma separated list of formal arguments.

3. The \_\_\_\_\_\_\_\_\_\_ function returns a list of all the formal arguments of a function  
a) formals()  
b) funct()  
c) formal()  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Functions have named arguments which can optionally have default values.

4. What will be the output of the following code ?

> f <- function(num = 1) {

+ hello <- "Hello, world!\n"

+ for(i in seq\_len(num)) {

+ cat(hello)

+ }

+ chars <- nchar(hello) \* num

+ chars

+ }

> f()

a)

Hello, world!

[1] 14

b)

Hello, world!

[1] 15

c)

Hello, world!

[1] 16

d) All of the mentioned  
View Answer

Answer:a  
Explanation:The formal arguments are the arguments included in the function definition.

5. Point out the wrong statement :  
a) A formal argument can be a symbol, a statement of the form ‘symbol = expression’, or the special formal argument  
b) The first component of the function declaration is the keyword function  
c)The value returned by the call to function is not a function  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:The value returned by the call to function is a function.

6. You can check to see whether an R object is NULL with the \_\_\_\_\_\_\_\_\_ function.  
a) is.null()  
b) is.nullobj()  
c) null()  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:It is sometimes useful to allow an argument to take the NULL value, which might indicate that the function should take some specific action.

7. Which of the following code will print NULL ?  
a) > args(paste)  
b) > arg(paste)  
c) > args(pastebin)  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:One catch with … is that any arguments that appear after … on the argument list must be named explicitly and cannot be partially matched or matched positionally.

8. What will be the output of following code ?

> f <- function(a, b) {

+ a^2

+ }

> f(2)

a) 4  
b) 3  
c) 2  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:This function never actually uses the argument b, so calling f(2) will not produce an error because the 2 gets positionally matched to a.

9. What will be the output of following code snippet ?

> paste("a", "b", sep = ":")

a) “a+b”  
b) “a=b”  
c) “a:b”  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:With the paste() function, the arguments sep and collapse must be named explicitly and in full if the default values are not going to be used.

10.What will be the output of following code ?

> f <- function(a, b) {

+ print(a)

+ print(b)

+ }

> f(45)

a) 32  
b) 42  
c) 52  
d) 45  
View Answer

Answer:d  
Explanation:Arguments to functions are evaluated lazily, so they are evaluated only as needed in the body of the function.

This set of R Programming Language Multiple Choice Questions & Answers (MCQs) focuses on “Dates and Times”.

1. \_\_\_\_\_\_\_\_\_ is an indication that a fatal problem has occurred and execution of the function stops  
a) message  
b) error  
c) warning  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Errors are produced by the stop() function.

2. Point out the correct statement :  
a) R has a number of ways to indicate to you that something’s not right  
b) Executing any function in R may result in the condition  
c) “condition” is a generic concept for indicating that something unexpected has occurred  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:;Programmers can create their own custom conditions if they want.

3. What would be the value of following expression ?

log(-1)

a) Warning in log(-1): NaNs produced  
b) 1  
c) Null  
d) 0  
View Answer

Answer:a  
Explanation:This warning lets you know that taking the log of a negative number results in a NaN value because you can’t take the log of negative numbers.

4. Warnings are generated by the \_\_\_\_\_\_\_\_\_ function  
a) warning()  
b) error()  
c) run()  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:warning is an indication that something is wrong but not necessarily fatal; execution of the function continues.

5. Point out the correct statement :  
a) POSIX represents a portable operating system interface, primarily for UNIX systems  
b) There are different levels of indication that can be used, ranging from mere notification to fatal error  
c) The default input format for POSIX dates consists of the month, followed by the year and day, separated by slashes or dashes  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Dates stored in the POSIX format are date/time values (like dates with the chron library), but also allow modification of time zones.

6. What will be the output of the following code ?

> printmessage <- function(x) {

+ if(x > 0)

+ print("x is greater than zero")

+ else

+ print("x is less than or equal to zero")

+ invisible(x)

+ }

> printmessage(1)

a) Error  
b) Warning  
c) Messages  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:The function seems to work fine. No errors, warnings, or messages.

7. To get the current date, the \_\_\_\_\_\_\_ function will return a Date object which can be converted to a different class if necessary.  
a) Sys.Time  
b) Sys.Date  
c) Sys.DateTime  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The POSIXlt class stores date/time values as a list of components (hour, min, sec, mon, etc.) making it easy to extract these parts.

8. Which of the followin code represents internal representation of a Date object ?  
a) class(as.Date(“1970-01-02”))  
b) unclass(as.Date(“1970-01-02”))  
c) unclassint(as.Date(“1970-01-02”))  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:You can see the internal representation of a Date object by using the unclass() function.

9. What would be the output of the following code ?

> x <- as.Date("1970-01-01")

> x

a) “1970-01-01”  
b) “1970-01-02”  
c) “1970-02-01”  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Dates are represented by the Date class and can be coerced from a character string using the as.Date() function.

10. What would be the output of the following code ?

> printmessage <- function(x) {

+ if(x > 0)

+ print("x is greater than zero")

+ else

+ print("x is less than or equal to zero")

+ invisible(x)

+ }

> printmessage(NA)

a) Error  
b) Warning  
c) Messages  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:You can’t do that test if x is a NA or NaN value.

1. What will be the output of following code snippet ?

> lm <- function(x) { x \* x }

> lm

a) function(x) { x \* x }  
b) func(x) { x \* x }  
c) function(x) { x / x }  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:When R tries to bind a value to a symbol, it searches through a series of environments to find the appropriate value.

2. Point out the correct statement :  
a) The search list can be found by using the searchlist() function  
B) The search list can be found by using the search() function  
c) The global environment or the user’s workspace is always the second element of the search list  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Base package is always the last element.

3. A function, together with an environment, makes up what is called a \_\_\_\_\_\_ closure.  
a) formal  
b) function  
c) reflective  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The function closure model can be used to create functions that “carry around” data with them.

4. Which of the variable in the following code is variable ?

> f <- function(x, y) {

+ x^2 + y / z

+ }

a) x  
b) y  
c) z  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:This function has 2 formal arguments x and y. In the body of the function there is another symbol z. In this case z is called a free variable.

5. Point out the wrong statement :  
a) The order of the packages on the search list does not matter  
b) R has separate namespaces for functions and non-functions  
c) Users can configure which packages get loaded on startup so if you are writing a function  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:The order of the packages on the search list matters, particularly if there are multiple objects with the same name in different packages.

6. R uses \_\_\_\_\_\_\_\_\_ scoping⁶⁰ or static scoping.  
a) reflective  
b) transitive  
c) lexical  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Lexical scoping in R means that the values of free variables are searched for in the environment in which the function was defined.

7. The only environment without a parent is the \_\_\_\_\_\_\_\_ environment.  
a) full  
b) half  
c) NULL  
d) empty  
View Answer

Answer:d  
Explanation:Every environment has a parent environment and it is possible for an environment to have multiple “children”.

8. The \_\_\_\_\_\_\_\_ for R are the main feature that make it different from the original S language  
a) scoping rules  
b) closure rules  
c) environment rules  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:This function never actually uses the argument b, so calling f(2) will not produce an error because the 2 gets positionally matched to a.

9. The \_\_\_\_\_\_\_\_\_ function is a kind of “constructor function” that can be used to construct other functions.  
a) make.pow()  
b) make.power()  
c) keep.power()  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:Typically, a function is defined in the global environment, so that the values of free variables are just found in the user’s workspace.

10.What will be the output of following code ?

> g <- function(x) {

+ a <- 3

+ x+a+y

+ ## 'y' is a free variable

+ }

> g(2)

a) 9  
b) 42  
c) 8  
d) Error  
View Answer

Answer:d  
Explanation:Object ‘y’ not found error is displayed

1. \_\_\_\_\_\_\_\_ functions can be “built which contain all of the necessary data for evaluating the function  
a) Objective  
b) reflective  
c) Nested  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:However, an objective function that needs to be minimized might depend on a host of other things besides its parameters.

2. Point out the wrong statement :  
a) Dynamic scoping turns out to be particularly useful for simplifying statistical computations  
B) Lexical scoping turns out to be particularly useful for simplifying statistical computations  
c) The scoping rules of a language determine how values are assigned to free variables  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Free variables are not formal arguments and are not local variables (assigned inside the function body).

3. Which of the following language supports lexical scoping ?  
a) Perl  
b) Python  
c) Common Lisp  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:Lexical scoping in R has consequences beyond how free variables are looked up.

4. \_\_\_\_\_\_\_\_\_ require you to pass a function whose argument is a vector of parameters (  
a) optimize()  
b) optimise()  
c) opt()  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Optimization routines in R like optim(), nlm(), and optimize() require you to pass a function.

5. Point out the correct statement :  
a) An environment is a collection of (symbol, value) pairs, i.e. x is a symbol and 3.14 might be its value  
b) If the value of a symbol is not found in the environment in which a function was defined, then the search is continued in the child environment  
c) After the top-level environment, the search continues down the search list until we hit the parent environment  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Every environment has a parent environment and it is possible for an environment to have multiple “children”.

6. What will be the output of the following code ?

function(p) {

params[!fixed] <- p

mu <- params[1]

sigma <- params[2]

## Calculate the Normal density

a <- -0.5\*length(data)\*log(2\*pi\*sigma^2)

b <- -0.5\*sum((data-mu)^2) / (sigma^2)

-(a + b)

}

> ls(environment(nLL))

a) “data” “fixed” “param”  
b) “data” “variable” “params”  
c) “data” “fixed” “params”  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:nLL is one of the optimization functions in R.

7. What will be the output of the following code ?

> nLL <- make.NegLogLik(normals, c(FALSE, 2))

> optimize(nLL, c(-1, 3))$minimum

a) 1.217775  
b) 2.217775  
c) 3  
d) empty  
View Answer

Answer:d  
Explanation:optimize() function can be used rather than optim().

8. What will be the output of the following code ?

> nLL <- make.NegLogLik(normals, c(1, FALSE))

> optimize(nLL, c(1e-6, 10))$minimum

a) 1.217775  
b) 1.800596  
c) 3.73424  
d) empty  
View Answer

Answer:b  
Explanation:Sigma is estimated by holding mu fixed at 1.

9. The \_\_\_\_\_\_\_\_\_ function is used to plot negative likelihood.  
a) plot()  
b) graph()  
c) graph.plot()  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:For simple scatter plots, plot.default will be used.

10.What will be the output of following code ?

> g <- function(x) {

+ a <- 3

+ x+a+y

+ ## 'y' is a free variable

+ }

> y <- 3

> g(2)

a) 9  
b) 42  
c) 8  
d) Error  
View Answer

Answer:c  
Explanation:Here, y is defined in the global environment, which also happens to be where the function g() is defined

1. \_\_\_\_\_\_\_\_ loop over a list and evaluate a function on each element  
a) apply()  
b) lapply()  
c) sapply()  
d) mapply()  
View Answer

Answer:a  
Explanation:An auxiliary function split is also useful, particularly in conjunction with lapply.

2. Point out the wrong statement :  
a) Multi-line expressions with curly braces are just not that easy to sort through when working on the command line  
B) lappy() loops over a list, iterating over each element in that list  
c) lapply() does not always returns a list  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:lapply() always returns a list, regardless of the class of the input.

3. \_\_\_\_\_\_\_\_\_\_ function is same as lapply in R  
a) apply()  
b) lapply()  
c) sapply()  
d) mapply()  
View Answer

Answer:c  
Explanation:lapply tries to simplify the result.

4. Which of the following is multivariate version of lapply ?  
a) apply()  
b) lapply()  
c) sapply()  
d) mapply()  
View Answer

Answer:d  
Explanation:The mapply() function is a multivariate apply of sorts which applies a function in parallel over a set of arguments.

5. Point out the correct statement :  
a) lapply() takes elements of the list and passes them as the first argument of the function you are applying  
b) You can use lapply() to evaluate a function multiple times each with a different argument  
c) Functions that you pass to lapply() may have other arguments  
d) None of the mentioned  
View Answer

6. \_\_\_\_\_\_\_\_ applies a function over the margins of an array.  
a) apply()  
b) lapply()  
c) tapply()  
d) mapply()  
View Answer

Answer:a  
Explanation:The apply() function is used to a evaluate a function (often an anonymous one) over the margins of an array.

7. \_\_\_\_\_\_\_ is used to apply a function over subsets of a vector.  
a) apply()  
b) lapply()  
c) tapply()  
d) mapply()  
View Answer

Answer:c  
Explanation:t in tapply stands for table.

8. lappy functions takes \_\_\_\_\_\_\_\_\_ arguments in R language.  
a) two  
b) three  
c) four  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:This function takes three arguments: (1) a list X; (2) a function (or the name of a function) FUN; (3) other arguments via its … argument.

9. Body of lapply function is :  
a)

function (X, FUN, ...)

{

FUN <- match.fun(FUN)

if (!is.vector(X) || is.object(X))

X <- as.list(X)

.Internal(lapply(X, FUN))

}

b)

function (X, FUN, ...)

{

FUN <- match.fun(FUN)

if (!is.vector(X) | is.object(X))

X <- as.list(X)

.Internal(lapply(X, FUN))

}

c)

function (X, FUN, ...)

{

FUN <- match.fun(FUN)

if (is.vector(X) || is.object(X))

X <- as.list(X)

.Internal(lapply(X, FUN))

}

d) None of the mentioned  
View Answer

Answer:a  
Explanation:Actual looping is done internally in C code for efficiency reasons.

10.What will be the output of following code ?

> x <- list(a = 1:5, b = rnorm(10))

> lapply(x, mean)

a)

$a

[1] 3

$b

[1] 0.1322028

b)

$a

[1] 4

$b

[1] 0.1322028

c)

$a

[1] 5

$b

[1] 0.1322028

d) Error  
View Answer

Answer:a  
Explanation:If the original list has names, the the names will be preserved in the output

1. \_\_\_\_\_\_\_\_\_ is an indication that a fatal problem has occurred and execution of the function stops  
a) message  
b) error  
c) warning  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Errors are produced by the stop() function.

2. Point out the correct statement :  
a) R has a number of ways to indicate to you that something’s not right  
b) Executing any function in R may result in the condition  
c) “condition” is a generic concept for indicating that something unexpected has occurred  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:Programmers can create their own custom conditions if they want.

3. What would be the value of following expression ?

> log(-2.3)

a) Warning in log(-2.3): NaNs produced  
b) 1  
c) Null  
d) 0  
View Answer

Answer:a  
Explanation:This warning lets you know that taking the log of a negative number results in a NaN value because you can’t take the log of negative numbers.

4. Warnings are generated by the \_\_\_\_\_\_\_\_\_ function  
a) warning()  
b) error()  
c) run()  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:warning is an indication that something is wrong but not necessarily fatal; execution of the function continues.

5. Point out the correct statement :  
a) Vectorizing the function can be accomplished easily with the Vectorize() function  
b) There are different levels of indication that can be used, ranging from mere notification to fatal error  
c) Vectorizing the function can be accomplished easily with the vector() function  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Vectorize() function does not preserve the invisibility of the return value.

6. What will be the output of the following code ?

> printmessage <- function(x) {

+ if(x > 0)

+ print("x is greater than zero")

+ else

+ print("x is less than or equal to zero")

+ invisible(x)

+ }

> printmessage(1)

a) Error  
b) Warning  
c) Messages  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:The function seems to work fine. No errors, warnings, or messages.

7. What will be the value of following expression ?  
a) Warning in log(c(-1, 2)): NaNs produced  
b) Error in log(c(-1, 2)): NaNs produced  
c) Message  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Warning is produced due to negative values.

8. Which of the following code represents internal representation of a Date object ?  
a) class(as.Date(“1970-01-02”))  
b) unclass(as.Date(“1970-01-02”))  
c) unclassint(as.Date(“1970-01-02”))  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:You can see the internal representation of a Date object by using the unclass() function.

9. What would be the output of the following code ?

> printmessage2 <- function(x) {

+ if(is.na(x))

+ print("x is a missing value!")

+ else if(x > 0)

+ print("x is greater than zero")

+ else

+ print("x is less than or equal to zero")

+ invisible(x)

+ }

> printmessage2(NA)

a) “x is a missing value!”  
b) “x is greater than zero”  
c) “x is less than or equal to zero”  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:We can fix Missing value problem by anticipating the possibility of NA values and checking to see if the input is NA with the is.na() function.

10. What would be the output of the following code ?

> printmessage <- function(x) {

+ if(x > 0)

+ print("x is greater than zero")

+ else

+ print("x is less than or equal to zero")

+ invisible(x)

+ }

> printmessage(NA)

a) Error  
b) Warning  
c) Messages  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:You can’t do that test if x is a NA or NaN value.

1. What will be the output of the following code ?

> x <- list(a = 1:4, b = rnorm(10), c = rnorm(20, 1), d = rnorm(100, 5))

> lapply(x, mean)

a)

$a

[1] 2.5

$b

[1] 1.248845

$c

[1] 1.9935285

Loop Functions 90

$d

[1] 5.051388

b)

$a

[1] 2.5

$b

[1] 0.248845

$c

[1] 0.9935285

Loop Functions 90

$d

[1] 5.051388

c)

$a

[1] 3.5

$b

[1] 0.248845

$c

[1] 0.9935285

Loop Functions 90

$d

[1] 5.051388

d) None of the mentioned  
View Answer

Answer:b  
Explanation:You can use lapply() to evaluate a function multiple times each with a different argument.

2. Point out the wrong statement :  
a) The sapply() function behaves similarly to lapply()  
B) With multiple factors and many levels, creating an interaction can result in many levels that are empty  
c) apply() can be thought of as a combination of split() and sapply() for vectors only  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:tapply() can be thought of as a combination of split() and sapply() for vectors only.

3. What will be the output of the following code ?

> x <- 1:4

> lapply(x, runif)

a)

[[1]]

[1] 0.02778712

[[2]]

[1] 0.5273108 0.8803191

[[3]]

[1] 0.37306337 0.04795913 0.13862825

[[4]]

[1] 0.3214921 0.1548316 0.1322282 0.2213059

b)

[[1]]

[1] 1.02778712

[[2]]

[1] 2.5273108 0.8803191

[[3]]

[1] 3.37306337 0.04795913 0.13862825

[[4]]

[1] 0.3214921 0.1548316 0.1322282 0.2213059

c)

[[1]]

[1] 1.02778712

[[2]]

[1] 0.5273108 0.8803191

[[3]]

[1] 0.37306337 0.04795913 0.13862825

[[4]]

[1] 3.3214921 2.1548316 1.1322282 0.2213059

d) None of the mentioned  
View Answer

Answer:a  
Explanation:In the above question, the first argument of runif() is n, and so the elements of the sequence 1:4 all got passed to the n argument of runif().

4. Which of the following code will print the following result ?

[[1]]

[1] 2.263808

[[2]]

[1] 1.314165 9.815635

[[3]]

[1] 3.270137 5.069395 6.814425

[[4]]

[1] 0.9916910 1.1890256 0.5043966 9.2925392

a)

> x <- 1:4

> lapply(x, runif, min = 0, max = 10)

b)

> x <- 1:4

> lapply(x, runif, min = 0, max = 9)

c)

> x <- 1:3

> lapply(x, runif, min = 0, max = 10)

d) None of the mentioned  
View Answer

Answer:a  
Explanation:Once the call to lapply() is finished, the function disappears and does not appear in the workspace.

5. Point out the correct statement :  
a) split() takes elements of the list and passes them as the first argument of the function you are applying  
b) You can use tsplit() to evaluate a function single time each with a same argument  
c) Sequence of operations is sometimes referred to as “map-reduce”  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:The results of applying the function over the subsets are then collated and returned as an object.

6. What will be the output of the following code ?

> x <- list(a = matrix(1:4, 2, 2), b = matrix(1:6, 3, 2))

> lapply(x, function(elt) { elt[,1] })

a)

$a

[1] 1 2

$b

[1] 1 2 3

b)

$a

[1] 1 2 3

$b

[1] 1 2 3

c)

$a

[1] 1 2 3

$b

[1] 1 2

d) All of the mentioned  
View Answer

Answer:a  
Explanation:You can put an arbitrarily complicated function definition inside lapply().

7. The \_\_\_\_\_ function takes a vector or other objects and splits it into groups determined by a factor or list of factors.  
a) apply()  
b) lsplit()  
c) split()  
d) mapply()  
View Answer

Answer:c  
Explanation:The combination of split() and a function like lapply() or sapply() is a common paradigm in R.

8. Which of the following is valid body of split function ?  
a) function (x, f)  
b) function (x, drop = FALSE, …)  
c) function (x, f, drop = FALSE, …)  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:x is a vector (or list) or data frame.

9.What will be the output of the following code ?

> f <- function(elt) {

+ elt[, 1]

+ }

> lapply(x, f)

a)

$a

[1] 1 2

$b

[1] 1 2 3

b)

$a

[1] 1 2 3

$b

[1] 1 2 3

c)

$a

[1] 1 2 3

$b

[1] 1 2

d) All of the mentioned  
View Answer

Answer:a  
Explanation:Whether you use an anonymous function or you define a function first depends on your context.

10.What will be the output of following code ?

> x <- list(a = 1:4, b = rnorm(10), c = rnorm(20, 1), d = rnorm(100, 5))

> sapply(x, mean)

a)

a b c d

2.500000 -0.251483 1.481246 4.968715

b)

a b c d

2.500000 -3.251483 2.481246 5.968715

c)

a b c d

3.500000 0.251483 1.481246 4.968715

d) Error  
View Answer

Answer:a  
Explanation:sapply() collapsed the output into a numeric vector, which is often more useful than a list

1. \_\_\_\_\_\_\_\_\_\_ prints out the function call stack after an error occurs.  
a) trace()  
b) traceback()  
c) back()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:traceback() does nothing if there’s no error.

2. Point out the wrong statement :  
a) The primary task of debugging any R code is correctly diagnosing what the problem is  
b) R provides only two tools to help you with debugging your code  
c) print statement can be used for debugging purpose  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:R provides a number of tools to help you with debugging your code.

3. Which of the following is primary tool for debugging ?  
a) debug()  
b) trace()  
c) browser()  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Primary tools are mainly used for debugging R code.

4. \_\_\_\_\_\_\_\_ allows you to insert debugging code into a function a specific places  
a) debug()  
b) trace()  
c) browser()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The function call stack is the sequence of functions that was called before the error occurred.

5. Point out the correct statement :  
a) The traceback() function must be called immediately after an error occurs  
b) The debugger calls the browser at the very low level of the function body  
c) Every time you call the mod() function it will launch the interactive debugger  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:Once another function is called, you lose the traceback.

6. \_\_\_\_\_\_\_ allows you to modify the error behavior so that you can browse the function call stack  
a) debug()  
b) trace()  
c) recover()  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:The recover() function can be used to modify the error behavior of R when an error occurs.

7. \_\_\_\_\_\_ suspends the execution of a function wherever it is called and puts the function in debug mode  
a) debug()  
b) trace()  
c) recover()  
d) browser()  
View Answer

8. debug() flags a function for \_\_\_\_\_\_ mode in R mode.  
a) debug  
b) run  
c) compile  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:debug() allows you to step through execution of a function one line at a time.

9. What would be the output of the following code ?

> mean(x)

Error in mean(x) : object 'x' not found

> traceback()

a) 1: mean(x)  
b) Null  
c) 0  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:The traceback() function shows you how many levels deep you were when the error occurred.

10. The recover() function will first print out the function call stack when an \_\_\_\_\_\_\_ occurs.  
a) Error  
b) Warning  
c) Messages  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:When you choose a frame number, you will be put in the browse and will have the ability to poke around.

1. \_\_\_\_\_\_\_\_ generate random Normal variates with a given mean and standard deviation  
a) dnorm  
b) rnorm  
c) pnorm  
d) rpois  
View Answer

Answer:b  
Explanation:The “r” function is the one that actually simulates random numbers from that distribution.

2. Point out the correct statement :  
a) R comes with a set of pseudo-random number generators  
b) Random number generators cannot be used to model random inputs  
c) Statistical procedure does not require random number generation  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:R allows you to simulate from well known probability distributions like the Normal, Poisson, and binomial.

3. \_\_\_\_\_\_ evaluate the cumulative distribution function for a Normal distribution  
a) dnorm  
b) rnorm  
c) pnorm  
d) rpois  
View Answer

Answer:c  
Explanation:p stands for cumulative distribution.

4. \_\_\_\_\_\_\_ generate random Poisson variates with a given rate  
a) dnorm  
b) rnorm  
c) pnorm  
d) rpois  
View Answer

Answer:d  
Explanation:q stands for quantile function (inverse cumulative distribution).

5. Point out the wrong statement :  
a) For each probability distribution there are typically three functions  
b) For each probability distribution there are typically four functions  
c) r function is sufficient for simulating random numbers  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:There are typically four functions available that start with a “r”, “d”, “p”, and “q”.

6. Which of the following evaluate the Normal probability density (with a given mean/SD) at a point ?  
a) dnorm  
b) rnorm  
c) pnorm  
d) rpois  
View Answer

Answer:a  
Explanation:That point can be vector of points.

7. \_\_\_\_\_\_\_\_\_ is the most common probability distribution to work with.  
a) Gaussian  
b) Parametric  
c) Paradox  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Working with the Normal distributions requires using four functions.

8. What will be the output of the following code ?

> x <- rnorm(10)

> x

a)

[1] 0.01874617 -0.18425254 -1.37133055 -0.59916772 0.29454513

[6] 0.38979430 -1.20807618 -0.36367602 -1.62667268 -0.25647839

b)

[1] 22.20356 21.51156 19.52353 21.97489 21.48278 20.17869 18.09011

[8] 19.60970 21.85104 20.96596

c)

Min. 1st Qu. Median Mean 3rd Qu. Max.

18.09 19.75 21.22 20.74 21.77 22.20

d) All of the mentioned  
View Answer

Answer:a  
Explanation:Here we simulate standard Normal random numbers with mean 0 and standard deviation 1.

9. What will be the output of the following code ?

> x <- rnorm(10)

> summary(x)

a)

[1] 0.01874617 -0.18425254 -1.37133055 -0.59916772 0.29454513

[6] 0.38979430 -1.20807618 -0.36367602 -1.62667268 -0.25647839

b)

[1] 22.20356 21.51156 19.52353 21.97489 21.48278 20.17869 18.09011

[8] 19.60970 21.85104 20.96596

c)

Min. 1st Qu. Median Mean 3rd Qu. Max.

18.09 19.75 21.22 20.74 21.77 22.20

d) All of the mentioned  
View Answer

Answer:c  
Explanation:We can modify the default parameters to simulate numbers with mean 20 and standard deviation 2.

10. What will be the output of the following code ?

> pnorm(2)

a) 0.9772499  
b) 1.9772499  
c) 0.6772499  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:If you wanted to know what was the probability of a random Normal variable of being less than 2, you could use the pnorm() function to do that calculation.

This set of R Programming Questions for entrance exams focuses on “Simulation”.

1. \_\_\_\_\_\_\_\_\_ ensures reproducibility of the sequence of random numbers.  
a) sets.seed()  
b) set.seed()  
c) set.seedvalue()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Setting the random number seed with set.seed() ensures reproducibility of the sequence of random numbers.

2. Point out the correct statement :  
a) When simulating any random numbers it is not essential to set the random number seed  
b) It is not possible to generate random numbers from other probability distributions like the Poisson  
c) You should always set the random number seed when conducting a simulation  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Otherwise, you will not be able to reconstruct the exact numbers that you produced in an analysis.

3. 5 Normal random numbers can be generated with rnorm() by setting seed value to :  
a) 1  
b) 2  
c) 3  
d) 4  
View Answer

Answer:a  
Explanation:set.seed(1) will give 5 normal random numbers.

4. \_\_\_\_\_\_\_ function is used to simulate binary random variables.  
a) dnorm  
b) rbinom()  
c) binom()  
d) rpois  
View Answer

Answer:b  
Explanation:rbinom() is used to simulate a predictor variable x that is binary instead of having a Normal distribution.

5. Point out the wrong statement :  
a) Drawing samples from specific probability distributions can be done with “s” functions  
b) The sample() function draws randomly from a specified set of (scalar) objects allowing you to sample from arbitrary distributions of numbers  
c) The sampling() function draws randomly from a specified set of objects  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:The sample() function can be used to draw random samples from arbitrary vectors.

6. What will be the output of the following code >

> set.seed(10)

> x <- rbinom(100, 1, 0.5)

> str(x)

a)

int [1:100] 1 0 0 1 0 0 0 0 1 0 ...

b)

int [1:100] 10 0 01 1 0 0 01 0 1 0 ...

c)

int [1:100] 1 03 0 1 0 0 0 02 1 0 ...

d)

int [1:100] 1 2 3 1 1 0 0 0 1 0 ...

View Answer

Answer:a  
Explanation:Graph of x can be plotted using plot function.

7. \_\_\_\_\_\_\_\_\_\_ distribution is commonly used to model data that come in the form of counts.  
a) Gaussian  
b) Parametric  
c) Poisson  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:It is possible to generate random numbers from other probability distributions like the Poisson.

8. What will be the output of the following code ?

> rpois(10, 1)

a)

[1] 7 0 1 1 2 1 1 4 1 2

b)

[1] 0 8 1 1 2 1 1 4 1 2

c)

[1] 0 0 1 1 2 1 1 4 1 2

d) All of the mentioned  
View Answer

Answer:c  
Explanation:The above code represents count with mean of 1.

9. Which of the following code represents count with mean of 2 ?  
a) rpois(10, 2)  
b) rpois(10, 20)  
c) rpois(20, 2)  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:rpois(10, 20) give counts with a mean of 20.

10. What will be the output of the following code ?

> set.seed(20)

> x <- rnorm(100)

> e <- rnorm(100, 0, 2)

> y <- 0.5 + 2 \* x + e

> summary(y)

a)

Min. 1st Qu. Median Mean 3rd Qu. Max.

-6.4080 -1.5400 0.6789 0.6893 2.9300 6.5050

b)

Min. 1st Qu. Median Mean 3rd Qu. Max.

-6.4080 -10.5400 0.6789 5.6893 2.9300 6.5050

c)

Min. 1st Qu. Median Mean 3rd Qu. Max.

-1.4080 -6.5400 0.6789 0.6893 2.9300 6.5050

d) All of the mentioned  
View Answer

Answer:a  
Explanation:The above code computes the outcome via the linear model.

1. \_\_\_\_\_\_\_\_ is a systematic way to examine how much time is spent in different parts of a program.  
a) Profiling  
b) Monitoring  
c) Logging  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Sometimes profiling becomes necessary as a project grows and layers of code are placed on top of each other.

2. Point out the correct statement :  
a) The Rprofiler() function starts the profiler in R  
b) Using system.time() allows you to test certain functions or code blocks to see if they are taking excessive amounts of time  
c) R must not be compiled with profiler support  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:However, this approach assumes that you already know where the problem is and can call system.time() on it that piece of code.

3. R comes with a \_\_\_\_\_\_\_\_ to help you optimize your code and improve its performance.  
a) debugger  
b) monitor  
c) browser  
d) profiler  
View Answer

Answer:a  
Explanation:In general, it’s usually a bad idea to focus on optimizing your code at the very beginning of development.

4. The \_\_\_\_\_\_\_ function computes the time (in seconds) needed to execute an expression.  
a) system.timedeb()  
b) system.time()  
c) system.datetime()  
d) All of the mentioned  
View Answer

5. Point out the correct statement :  
a) Rprofiler() tabulates how much time is spent inside each function  
b) Rprof() keeps track of the function call stack at regularly sampled intervals  
c) By default, the profiler samples the function call stack every 2 seconds  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:The profiler is started by calling the Rprof() function.

6. system.time function returns an object of class \_\_\_\_\_\_\_ which contains two useful bits of information.  
a) debug\_time  
b) proc\_time  
c) procedure\_time  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:if there’s an error, gives the time until the error occurred.

7. \_\_\_\_\_\_\_\_\_ time is time charged to the CPU(s) for the R expression.  
a) elapsed  
b) user  
c) response  
d) All of the mentioned  
View Answer

8. The elapsed time may be \_\_\_\_\_\_\_\_ than the user time if your machine has multiple cores/processors  
a) smaller  
b) greater  
c) equal to  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:The elapsed time may be greater than the user time if the CPU spends a lot of time waiting around.

9. Parallel processing is done via \_\_\_\_\_\_\_\_\_\_ package can make the elapsed time smaller than the user time.  
a) parallel  
b) statistics  
c) distributed  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:When you have multiple processors/- cores/machines working in parallel, the amount of time that the collection of CPUs spends working on a problem is the same as with a single CPU, but because they are operating in parallel, there is a savings in elapsed time.

10.You can time \_\_\_\_\_\_\_\_ expressions by wrapping them in curly braces within the call to system.time().  
a) smaller  
b) longer  
c) error  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:If your expression is getting pretty long (more than 2 or 3 lines), it might be better to either break it into smaller pieces or to use the profiler.

1. The profiler can be turned off by passing \_\_\_\_\_\_\_\_\_ to Rprof().  
a) 0  
b) 1  
c) 2  
d) NULL  
View Answer

Answer:d  
Explanation:Rprof(NULL) is used to turn off the profiler.

2. Point out the correct statement :  
a) Rprof() is used to turn off the profiler  
b) At each line of the output, the profiler writes out the function call stack  
c) The summaryprof() function tabulates the R profiler output  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The Rprofiler() function starts the profiler in R.

3. How many methods exist for normalizing the data ?  
a) one  
b) two  
c) three  
d) profiler  
View Answer

Answer:b  
Explanation:There are two methods for normalizing the data.

4. \_\_\_\_\_\_\_ divides the time spend in each function by the total run time  
a) “by.sum”  
b) “by.total”  
c) “by.self”  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:“by.self” does the same as “by.total”.

5. Point out the correct statement :  
a) “by.total” first subtracts out time spent in functions above the current function in the call stack  
b) The summaryRprof() function calculates how much time is spend in which function  
c) By default, the profiler samples the function call stack every 0.02 seconds  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:Output of by.self is more useful than by.total for interpreting the data.

6. Which of the following function actually fits the linear model ?  
a) lm.time()  
b) lm.date()  
c) lm.fit()  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:lm() function does a bit of pre-processing and checking before it actually fits the model.

7. \_\_\_\_\_\_\_\_\_ time is time charged to the CPU(s) for the R expression.  
a) elapsed  
b) user  
c) response  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Usually, the user time and elapsed time are relatively close, for straight computing tasks.

8. The final bit of output that summaryRprof() provides is the \_\_\_\_\_\_ interval and the total runtime.  
a) response  
b) sampling  
c) processing  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:You’re going to be spending a lot of time in preprocessing and checking.

9. Which of the following statement gives sampling interval ?  
a) $sampling.interval  
b) $sampling.time  
c) $sampling.date  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:Sampling time is expressed in secs.

10.Which of the following code is not profiled ?  
a) C  
b) C++  
c) Java  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:C or Fortran code is not profiled.

1. \_\_\_\_\_\_\_ grammar makes a clear distinction between your data and what gets displayed on the screen or page.  
a) ggplot1  
b) ggplot2  
c) d3.js  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The emphasis in ggplot2 is reducing the amount of thinking time by making it easier to go from the plot in your brain to the plot on the page.

2. Point out the wrong statement :  
a) mean\_se is used to calculate mean and standard errors on either side  
b) hmisc wraps up a selection of summary functions from Hmisc to make it easy to use  
c) plot is used to create a scatterplot matrix (experimental)  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:plotmatrix is used to create a scatterplot matrix (experimental).

3. Which of the following cuts numeric vector into intervals of equal length ?  
a) cut\_interval  
b) cut\_time  
c) cut\_number  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:cut\_number cuts numeric vector into intervals containing equal number of points.

4. Which of the following is a plot to investigate the order in which observations were recorded ?  
a) ggplot  
b) ggsave  
c) ggpcp  
d) ggorder  
View Answer

Answer:d  
Explanation:ggsave save a ggplot with sensible defaults.

5. Point out the wrong statement :  
a) theme\_minimal is minimalistic theme with no background annotations  
b) theme\_color is classic-looking theme, with x and y axis lines and no gridlines  
c) theme\_classic is a classic-looking theme  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:theme\_classic is a classic-looking theme, with x and y axis lines and no gridlines.

6. \_\_\_\_\_\_\_\_ is used for translating between qplot and base graphics.  
a) translate\_qplot\_base  
b) translate\_qplot\_gpl  
c) translate\_qplot\_lattice  
d) translate\_qplot\_ggplot  
View Answer

Answer:a  
Explanation:translate\_qplot\_gpl is used for translating between qplot and Graphics Production Library (GPL).

7. \_\_\_\_\_\_\_\_\_\_ modifies geom/stat aesthetic defaults for future plots  
a) translate\_qplot\_base  
b) translate\_qplot\_gpl  
c) translate\_qplot\_defaults  
d) translate\_qplot\_ggplot  
View Answer

Answer:c  
Explanation:translate\_qplot\_gpl is used for translating between qplot and Graphics Production Library (GPL).

8. Which of the following is discrete state calculator ?  
a) discrete\_scale  
b) ggpcp  
c) ggfluctuation  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:ggpcp is used to create a parallel coordinate plot.

9. Which of the following creates fluctuation plot ?  
a) ggmissplot  
b) ggmissing  
c) ggfluctuation  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Fluctuations are used to detect outliers.

10. \_\_\_\_\_\_\_\_ is used to create a plot to illustrate patterns of missing values.  
a) ggmissplot  
b) ggmissing  
c) ggfluctuation  
View Answer

Answer:b  
Explanation:The missing values plot is a useful tool to get a rapid overview of the number and pattern of missing values in a dataset.

1. \_\_\_\_\_\_\_\_\_ generate aesthetic mappings that describe how variables in the data are.  
a) aes\_all  
b) aes\_auto  
c) aes  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:aes\_auto is used for automatic aesthetic mapping.

2. Point out the correct statement :  
a) update\_element update contents of a theme  
b) Use theme\_update\_element to modify a small number of elements of the current theme or use theme\_set to completely override it  
c) theme\_bw is theme with grey background and white gridlines  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:update\_element function is deprecated. Use %+replace% or +.gg instead.

3. \_\_\_\_\_\_ generate aesthetic mappings from a string  
a) aes\_all  
b) aes\_auto  
c) aes\_string  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Aesthetic mappings describe how variables in the data are mapped to visual properties (aesthetics) of geoms.

4. Which of the following is a differentiation related aesthetic ?  
a) aes\_position  
b) aes\_group\_order  
c) aes\_linetype\_size\_shape  
d) ggorder  
View Answer

Answer:c  
Explanation:aes\_position is position related aesthetics.

5. Point out the wrong statement :  
a) is.rel reports whether x is a theme object  
b) is.theme reports whether x is a theme object  
c) opts build a theme (or partial theme) from theme elements  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:is.rel reports whether x is a real object.

6. \_\_\_\_\_\_\_\_ modify a ggplot or theme object by adding on new components.  
a) +.gg  
b) -.gg  
c) /.gg  
d) .gg  
View Answer

Answer:a  
Explanation:This operator allows you to add objects to a ggplot or theme object.

7. \_\_\_\_\_\_\_\_\_\_ create a complete ggplot appropriate to a particular data type  
a) autoplot  
b) is.ggplot  
c) printplot  
d) qplot\_ggplot  
View Answer

Answer:a  
Explanation:autoplot uses ggplot2 to draw a particular plot for an object of a particular class in a single command.

8. Which of the following creates a new ggplot plot from a data frame ?  
a) qplot\_ggplot  
b) ggplot.data.frame  
c) ggfluctuation  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Default list of aesthetic mappings are displayed.

9. Which of the following draws plot on current graphics device ?  
a) ggmissplot  
b) printplot  
c) print.ggplot  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:print.ggplot is also known as plot.ggplot.

10. \_\_\_\_\_\_\_\_ is used for relative sizing of theme elements.  
a) rel  
b) size  
c) relative  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:The syntax for rel is rel(X) where x is a number representing the relative size.

1. \_\_\_\_\_\_\_\_\_ display contours of a 3d surface in 2d.  
a) aes\_contor  
b) geom\_contour  
c) aes\_gem  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:A layer specific dataset – only needed if you want to override the plot defaults.

2. Point out the correct statement :  
a) autoplotgraph is used to complete ggplot appropriate to a particular data type  
b) auto\_element wraps up a projection of summary functions  
c) ggplot.data create a new ggplot plot from a data frame  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:is.ggplot reports whether x is a ggplot object.

3. \_\_\_\_\_\_ display a smooth density estimate.  
a) geom\_density2  
b) geom\_density  
c) aes\_sdensity  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:A smooth density estimate calculated by stat\_density.

4. Which of the following draws nothing.?  
a) geom\_blank  
b) geom  
c) geom\_bin2d  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:geom\_bin2d adds heatmap of 2d bin counts.

5. Point out the correct statement :  
a) is.theme reports whether x is a real object  
b) is.object reports whether x is a aesthetic object  
c) qplot is used for quick plot  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:is.rel reports whether x is a real object.

6. \_\_\_\_\_\_\_\_\_ describe the type of plot you will produce.  
a) geoms  
b) ggplot  
c) fplot  
d) gplot  
View Answer

Answer:a  
Explanation:Geoms is short form for geometric objects.

7. \_\_\_\_\_\_\_\_\_\_ is interval represented by a vertical line, with a point in the middle.  
a) geom\_range  
b) geom\_pointrange  
c) printplot  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:autoplot uses ggplot2 to draw a particular plot for an object of a particular class in a single command.

8. Which of the following creates a new ggplot plot from a data frame ?  
a) qplot\_ggplot  
b) ggplot.data.frame  
c) ggfluctuation  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:geom\_pointrange understands various aesthetics.

9. Which of the following draws plot on current graphics device ?  
a) ggmissplot  
b) printplot  
c) print.ggplot  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:print.ggplot is also known as plot.ggplot.

10.Which of the following create a set of identity mappings ?  
a) ggplot  
b) aes\_all  
c) aes  
d) ggorder  
View Answer

Answer:d  
Explanation:Character vector is given for the creation of identity.

1. \_\_\_\_\_\_\_\_\_ is new package that makes it easy to “tidy” your data.  
a) tidy  
b) tidyr  
c) tidyneat  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Tidy data is data that’s easy to work in R.

2. Point out the correct statement :  
a) Each row is an observation in tidy data  
b) Each column is a variable in tidy data  
c) Arranging your data in tidy way makes it easier to work  
d) All of the mentioned  
View Answer

Answer:d  
Explanation:When use tidy data and tidy tools, you spend less time worrying about how to feed the output from one function into the input of another.

3. Which of the following is complementary to tidyr ?  
a) geolr  
b) dplyr  
c) d3lr  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Its easy to munge with dplyr.

4. How many functions exist for tidying the data ?  
a) one  
b) two  
c) three  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:tidyr provides three main functions for tidying your messy data: gather(), separate() and spread().

5. Point out the correct statement :  
a) gather() makes “wide” data longer  
b) Two functions are present for tidy data  
c) separate() makes “wide” data longer  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:Other names for gather include melt (reshape2), pivot (spreadsheets) and fold (databases).

6. Which of the following function takes multiple columns ?  
a) spread()  
b) gather()  
c) separate()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:gather() gathers column into key-value pairs.

7. \_\_\_\_\_\_\_\_\_\_ uses regexp groups instead of a splitting pattern or position.  
a) spread()  
b) gather()  
c) separate()  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:separate() allows you to tease columns apart.

8. Which of the following function works similar to separate() ?  
a) extract()  
b) gather()  
c) sep()  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:extract() works in a similar way.

9. Which of the following d takes two columns and spreads them in to multiple columns ?  
a) ggmissplot  
b) printplot  
c) print.ggplot  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:spread() makes “long” data wide.

10.Spread function is known as \_\_\_\_\_\_\_\_\_\_\_ in spreadsheets.  
a) pivot  
b) unpivot  
c) cast  
d) order  
View Answer

Answer:b  
Explanation:Spread is known by other names in other places: it’s cast in reshape2, unpivot in spreadsheets and unfold in databases.

1. \_\_\_\_\_\_\_\_\_\_ is used when you have variables that form rows instead of columns.  
a) tidy()  
b) spread()  
c) separate()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:You need spread() less frequently than gather() or separate().

2. Point out the correct statement :  
a) tidyr and dplyr packages do not make use of the pipe operator  
b) tidyr does less than reshape2  
c) tidyr provides ability to string multiple functions together by incorporating %  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Just as reshape2 did less than reshape, tidyr does less than reshape2.

3. Which of the following merges two variables into one ?  
a) spread()  
b) gather()  
c) separate()  
d) unite()  
View Answer

Answer:b  
Explanation:The unite() function is a convenience function to paste together multiple variable values into one.

4. How many functions exist for wrangling the data with dplyr package ?  
a) one  
b) seven  
c) three  
d) five  
View Answer

Answer:b  
Explanation:dplyr provides seven main functions for tidying your messy data.

5. Point out the correct statement :  
a) gather() makes “lond” data wider  
b) tidyr is a reframing of reshape designed to accompany the tidy data framework  
c) There are two fundamental verbs of data tidying  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:In particular, built-in methods only work for data frames, and tidyr provides no margins or aggregation.

6. \_\_\_\_\_\_\_\_ function is similar to the existing subset() function in R  
a) rename  
b) filter  
c) set  
d) subset  
View Answer

Answer:b  
Explanation:The filter() function is used to extract subsets of rows from a data frame.

7. The \_\_\_\_\_\_ operator allows you to string operations in a left-to-right fashion  
a) %>%>  
b) %>%  
c) >%>%  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The pipeline operater %>% is very handy for stringing together multiple dplyr functions in a sequence of operations.

8. \_\_\_\_\_\_\_\_ add new variables/columns or transform existing variables  
a) mutate  
b) add  
c) apped  
d) arrange  
View Answer

Answer:a  
Explanation:arrange is used to reorder rows of a data frame.

9. \_\_\_\_\_\_\_\_\_ extract a subset of rows from a data frame based on logical conditions.  
a) rename  
b) filter  
c) set  
d) subset  
View Answer

Answer:a  
Explanation:rename is used to rename variables in a data frame.

10. dplyr can be integrated with the \_\_\_\_\_\_\_\_ package for large fast tables  
a) data.table  
b) read.table  
c) data.data  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:The dplyr package is handy way to both simplify and speed up your data frame management code

1.Which of the following is a principle of analytic graphics?  
a) Don’t plot more than two variables at at time  
b) Make judicious use of color in your scatterplots  
c) Show box plots (univariate summaries)  
d) Show causality, mechanism, explanation  
View Answer

Answer:d  
Explanation:Only do what your tools allow you to do.

2. What is the role of exploratory graphs in data analysis ?  
a) They are made for formal presentations.  
b) They are typically made very quickly.  
c) Axes, legends, and other details are clean and exactly detailed.  
d) They are used in place of formal modeling.  
View Answer

Answer:b  
Explanation:EDA is used to summarize main characteristic of data.

3. Which of the following is true about the base plotting system ?  
a) Margins and spacings are adjusted automatically depending on the type of plot and the data  
b) Plots are typically created with a single function call  
c) Plots are created and annotated with separate functions  
d) The system is most useful for conditioning plots  
View Answer

Answer:c  
Explanation:Functions like ‘plot’ or ‘hist’ typically create the plot on the graphics device and functions like ‘lines’, ‘text’, or ‘points’ will annotate or add data  
to the plot.

4. Which of the following is an example of a valid graphics device in R?  
a) A socket connection  
b) A Microsoft Word document  
c) A PDF file  
d) A file folder  
View Answer

Answer:c  
Explanation:PNG file is also valid graphics device.

5. Which of the following is an example of a vector graphics device in R?  
a) JPEG  
b) PNG  
c) GIF  
d) SVG  
View Answer

Answer:d  
Explanation:SVG stands for scalable vector graphics.

6. Bitmapped file formats can be most useful for  
a) Plots that may need to be resized  
b) Plots that require animation or interactivity  
c) Plots that are not scaled to a specific resolution  
d) Scatterplots with many many points  
View Answer

Answer:d  
Explanation:Scatterplots would be used frequently for particular dimension.

7. Which of the following functions is typically used to add elements to a plot in the base graphics system?  
a) lines()  
b) hist()  
c) plot()  
d) boxplot()  
View Answer

Answer:d  
Explanation:text() also can be used to add elements to a plot.

8. Which function opens the screen graphics device for the Mac ?  
a) bitmap()  
b) quartz()  
c) pdf()  
d) png()  
View Answer

Answer:b  
Explanation:quartz starts a graphics device driver for the Mac.

9. What does the ‘pch’ option to par() control ?  
a) the size of the plotting symbol in a scatterplot  
b) the line width in the base graphics system  
c) the orientation of the axis labels on the plot  
d) the plotting symbol/character in the base graphics system  
View Answer

Answer:d  
Explanation:R makes it easy to combine multiple plots into one overall graph, using either the par( ) or layout( ) function.

10.If I want to save a plot to a PDF file, which of the following is a correct way of doing that?  
a) Construct the plot on the screen device and then copy it to a PDF file with dev.copy2pdf()  
b) Construct the plot on the PNG device with png(), then copy it to a PDF with dev.copy2pdf().  
c) Open the PostScript device with postscript(), construct the plot, then close the device with dev.off().  
d) Open the screen device with quartz(), construct the plot, and then close the device with dev.off().  
View Answer

Answer:a  
Explanation:With the par( ) function, you can include the option mfrow=c(nrows, ncols) to create a matrix of nrows x ncols plots that are filled in by row.

1. \_\_\_\_\_\_\_\_\_\_ produces box-and-whisker plots.  
a) xyplot  
b) dotplot  
c) barchart  
d) bwplot  
View Answer

Answer:d  
Explanation:dotplot produces Cleveland dot plots.

2. \_\_\_\_\_\_\_\_\_\_ produces bivariate scatterplots or time-series plots.  
a) xyplot  
b) dotplot  
c) barchart  
d) bwplot  
View Answer

Answer:a  
Explanation:barchart produces bar plots.

3. Annotation of plots in any plotting system involves adding points, lines, or text to the plot, in addition to customizing axis labels or adding titles. Different plotting systems have different sets of functions for annotating plots in this way. Which of the following functions can be used to annotate the panels in a multi-panel lattice plot?  
a) points()  
b) panel.abline()  
c) lines()  
d) axis()  
View Answer

Answer:b  
Explanation:panel.abline() is one of the most used panel function.

4. \_\_\_\_\_\_\_\_\_\_\_\_ produces one-dimensional scatterplots.  
a) xyplot  
b) stripplot  
c) barchart  
d) bwplot  
View Answer

Answer:b  
Explanation:This function along with other high-level Lattice functions, respond to a common set of arguments.

5. which of the following functions can be used to finely control the appearance of all lattice plots ?  
a) par()  
b) print.trellis()  
c) splom()  
d) trellis.par.set()  
View Answer

Answer:d  
Explanation:All high-level function in lattice are generic.

6. What is ggplot2 an implementation of ?  
a) the Grammar of Graphics developed by Leland Wilkinson  
b) 3D visualization system  
c) the S language originally developed by Bell Labs  
d) the base plotting system in R  
View Answer

Answer:a  
Explanation:The ggplot2 package, created by Hadley Wickham, offers a powerful graphics language for creating elegant and complex plots.

7. For barchart and \_\_\_\_\_\_\_\_\_, non-trivial methods exist for tables and arrays, documented at barchart.table.  
a) scatterplot  
b) dotplot  
c) xyplot  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The numeric methods are equivalent to a call with no left hand side and no conditioning variables in the formula.

8. What is a geom in the ggplot2 system ?  
a) a plotting object like point, line, or other shape  
b) a method for making conditioning plots  
c) a method for mapping data to attributes like color and size  
d) a statistical transformation  
View Answer

Answer:a  
Explanation:The bar geom is used to produce 1d area plots.

9. Logical flag is applicable to which of the following plots ?  
a) scatterplot  
b) dotplot  
c) xyplot  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Logical flag applicable to bwplot, dotplot, barchart, and stripplot.

10. \_\_\_\_\_\_\_\_\_\_\_ is used to determine what is plotted for each group.  
a) panel.expose  
b) panel.impose  
c) panel.superpose  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:panel.superpose can be combined with different panel.groups functions.

1. Which of the following code create n samples of size “size” with probability prob from the binomial ?  
   a) z <- rinom(n,size,prob) b) z <- rbinom(n,size,prob) c) z <- binom(n,size,prob) d) All of the mentioned [expand title="View Answer"]Answer:b Explanation:To use the rbinom() function, you need to define three parameters.[/expand] 2. Which of the following code create a n item vector of random normal deviates ? a) x1 <- c(snorm(n)) b) x1 <- c(pnorm(n)) c) x1 <- c(rnorm(n)) d) All of the mentioned [expand title="View Answer"]Answer:c Explanation:rnorm generates random deviates.[/expand] 3. Which of the following statement can read csv files ? a) read.table(filename,header=TRUE,sep=',') b) read.csv(filename,header=TRUE,sep=',') c) read.tab(filename,header=TRUE,sep=',') d) None of the mentioned [expand title="View Answer"]Answer:a Explanation:Each row of the table appears as one line of the file.[/expand] 4. Which of the following statement read a tab or space delimited file ? a) read.table(filename,header=TRUE) b) read.CSV(filename,header=TRUE) c) read.table(filename,header=FALSE) d) read.tableall(filename,header=TRUE) [expand title="View Answer"]Answer:a Explanation:read.csv and read.csv2 are identical to read.table except for the defaults.[/expand] 5. which of the following statement chose those objects meeting a logical criterion ? a) sub(dataset,logical) b) subset(dataset,logical) c) subsetcon(dataset,logical) d) None of the mentioned [expand title="View Answer"]Answer:b Explanation:R's subsetting operators are powerful and fast.[/expand] 6. Which of the following statement is another way to get a subset ? a) subsetcon(dataset,logical) b) data.df[data.df=logical] c) sub(dataset,logical) d) None of the mentioned [expand title="View Answer"]Answer:b Explanation:subset(data.df,select=variables,logical) get those objects from a data frame that meet a criterion.[/expand] 7. Which of the following sort a dataframe by the order of the elements in B a) x[rev(order(x$B)),] b) x[ordersort(x$B),] c) x[order(x$B),] d) All of the mentioned [expand title="View Answer"]Answer:a Explanation:x[rev(order(x$B)),] sort the dataframe in reverse order.[/expand] 8. Which of the following is Mac menu command ? a) browse.workspace b) browse.works c) browser.workspace d) a statistical transformation [expand title="View Answer"]Answer:a Explanation:It is a Mac menu command that creates a window with information about all variables in the workspace.[/expand] 9. \_\_\_\_\_ list the variables in the workspace a) rm(x) b) rm(list=ls()) c) ls() d) attach(mat) [expand title="View Answer"]Answer:c Explanation:rm(x) removes x from the workspace.[/expand] 10. \_\_\_\_\_\_\_\_\_\_\_ remove all the variables from the workspace a) rm(x) b) rm(list=ls()) c) ls() d) attach(mat) [expand title="View Answer"]Answer:b Explanation:attach(mat) make the names of the variables in the matrix or data frame available in the workspace.[/expand]
2. Which of the following code will drop the nth column ?  
   a) new <- old[-n,] b) new <- old[,-n] c) new <- old[,-c(i,j)] d) new <- subset(old,logical) [expand title="View Answer"]Answer:a Explanation:new <- old[-n,] drops the nth row.[/expand] 2. Which of the following code drop the ith and jth column ? a) new <- old[-n,] b) new <- old[,-n] c) new <- old[,-c(i,j)] d) new <- subset(old,logical) [expand title="View Answer"]Answer:c Explanation:new <- subset(old,logical) select those cases that meet the logical condition.[/expand] 3. Which of the following statement find cases with no missing values ? a) complete <- subset(data.df,complete.cases(data.df) b) complete <- sub(data.df,complete.cases(data.df) c) complete <- subset(data.df,completeall.cases(data.df) d) new <- old[n1:n2,n3:n4] [expand title="View Answer"]Answer:a Explanation:new <- old[n1:n2,n3:n4] select the n1 through n2 rows of variables n3 through n4.[/expand] 4. Which of the following statement is normal distribution ? a) dnorm(x, mean=0, sd=1, log = FALSE) b) pnorm(q, mean=0, sd=1, lower.tail = TRUE, log.p = FALSE) c) qnorm(p, mean=0, sd=1, lower.tail = TRUE, log.p = FALSE) d) rnorm(n, mean=0, sd=1) [expand title="View Answer"]Answer:a Explanation:d stands for density.[/expand] 5. which of the following statement gives cumulative sum ? a) cumsum(x,na=rm=TRUE) b) cumprod(x) c) cummax(x) d) cummin(x) [expand title="View Answer"]Answer:a Explanation:cummax() function returns the cumulative maxima.[/expand] 6. Which of the following is uniform distribution ? a) dunif(x, min=0, max=1, log = FALSE) b) punif(q, min=0, max=1, lower.tail = TRUE, log.p = FALSE) c) qunif(p, min=0, max=1, lower.tail = TRUE, log.p = FALSE) d) runif(n, min=0, max=1) [expand title="View Answer"]Answer:a Explanation:These functions provide information about the uniform distribution on the interval from min to max.[/expand] 7. Which of the following truncates real x to integers ? a) as.numeric(x) b) as.integer(x) c) as.order(x) d) All of the mentioned [expand title="View Answer"]Answer:b Explanation:Compare to round(x,0) in R.[/expand] 8. Which of the following tests each element of x for membership in y ? a) y%in%x b) all(x) c) any(x) d) x%in%y [expand title="View Answer"]Answer:d Explanation:y%in%x tests each element of y for membership in x.[/expand] 9. Which of the following finds the maximum value in the vector x, exclude missing values a) rm(x) b) max(x, na.rm=TRUE) c) all(x) d) x%in%y [expand title="View Answer"]Answer:b Explanation:all(x%in%y) returns true if x is a proper subset of y.[/expand] 10. Which of the following produces the variance covariance matrix ? a) sd(x, na.rm=TRUE) b) mad(x, na.rm=TRUE) c) fivenum(x, na.rm=TRUE) d) var(x, na.rm=TRUE) [expand title="View Answer"]Answer:d Explanation:mad(x, na.rm=TRUE) gives median absolute deviation.[/expand]
3. 1. Which of the following will reverse the order of values in x ?  
   a) rev(x)  
   b) max(x, na.rm=TRUE)  
   c) all(x)  
   d) x%in%y  
   View Answer
4. Answer:a  
   Explanation:rev provides a reversed version of its argument.
5. 2. Which of the following finds row sums for each level of a grouping variable ?  
   a) rowSums (x, na.rm = FALSE, dims = 1)  
   b) colMeans(x, na.rm = FALSE, dims = 1)  
   c) rowMeans(x, na.rm = FALSE, dims = 1)  
   d) rowsum(x, group, reorder = TRUE, …)  
   View Answer
6. Answer:c  
   Explanation:False value leads to unexpected result.
7. 3. Which of the following statement applies the function (FUN) to either rows (1) or columns (2) on object X ?  
   a) apply(x,1,min)  
   b) apply(x,2,max)  
   c) col.max(x)  
   d) apply(X, MARGIN, FUN, …)  
   View Answer
8. Answer:d  
   Explanation:apply(x,2,max) finds the maximum for each column.
9. 4. Which of the following statement finds the maximum for each column ?  
   a) apply(x,2,max)  
   b) col.max(x)  
   c) which.min(x)  
   d) which.max(x)  
   View Answer
10. Answer:a  
    Explanation:col.max(x) is another way to find which column has the maximum value for each row.
11. 5. which of the following statement tells the row with the minimum value for every column ?  
    a) which.min(x)  
    b) which.max(x)  
    c) z=apply(x,1,which.min)  
    d) All of the mentioned  
    View Answer
12. Answer:a  
    Explanation:which() function gives the TRUE indices of a logical object, allowing for array indices.
13. 6. Which of the following may be used for linear regression ?  
    a) X %\*% Y  
    b) solve(A)  
    c) solve(A,B)  
    d) All of the mentioned  
    View Answer
14. Answer:c  
    Explanation:solve(A,B) implies inverse of A \* B.
15. 7. Which of the following finds row sums for each level of a grouping variable ?  
    a) as.numeric(x)  
    b) rowsum(x, group, reorder = TRUE, …)  
    c) as.order(x)  
    d) colSums (x, na.rm = FALSE, dims = 1)  
    View Answer
16. Answer:b  
    Explanation:rowsum compute column sums across rows of a numeric matrix-like object for each level of a grouping variable.
17. 8. Which of the following sets the size of the outer margins for the graph ?  
    a) par(mfrow=c(nrow,mcol))  
    b) par(ask=TRUE)  
    c) par(omi=c(0,0,1,0) )  
    d) All of the mentioned  
    View Answer
18. Answer:c  
    Explanation:par can be used to set or query graphical parameters.
19. 9. Which of the following function is used for plotting histogram ?  
    a) hist()  
    b) histog()  
    c) histg()  
    d) All of the mentioned  
    View Answer
20. Answer:a  
    Explanation:The generic function hist computes a histogram of the given data values.
21. 10. Which of the following will add the title “R language” to the graph ?  
    a) titleAdd( “R language”)  
    b) title( “R language”)  
    c) titleBar( “R language”)  
    d) var(x, na.rm=TRUE)  
    View Answer
22. Answer:b  
    Explanation:This function can be used to add labels to a plot.

1. \_\_\_\_\_\_ let’s you perform SQL queries on your R data frames.  
a) sqldf  
b) plyr  
c) forecast  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:sqldf uses SQLite syntax.

2. \_\_\_\_\_\_ splits a data frame and results an array (hence the da). Hopefully you’re getting the idea here.  
a) apply  
b) daply  
c) stats  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:ddply splits a data frame and returns a data frame.

3. \_\_\_\_\_\_\_\_ makes it incredibly easy to fit time series models like ARIMA, ARMA, AR, Exponential Smoothing, etc.  
a) sqldf  
b) plyr  
c) forecast  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Most important feature is the resulting forecast plot.

4. \_\_\_\_\_\_\_\_ provides needed string operators in R.  
a) str  
b) forecast  
c) stringr  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:stringr is remarkably easy to use.

5. Which of the following syntax is used to install forecast package ?  
a) install.pack(“forecast”)  
b) install.packages(“cast”)  
c) install.packages(“forecast”)  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:forecast is used for time series analysis.

6. Which of the following is similar to Moment.js ?  
a) stringr  
b) lubridate  
c) ploy  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:lubridate is one of those magical libraries that just seems to do exactly what you expect it to.

7. \_\_\_\_\_\_\_\_\_\_ modifies geom/stat aesthetic defaults for future plots  
a) translate\_qplot\_base  
b) translate\_qplot\_gpl  
c) translate\_qplot\_defaults  
d) translate\_qplot\_ggplot  
View Answer

Answer:c  
Explanation:translate\_qplot\_gpl is used for translating between qplot and Graphics Production Library (GPL).

8. Which of the following is a library for statistical quality control. ?  
a) gcc  
b) qcc  
c) anc  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:qcc can help you monitor transaction volumes, visitors or logins on your website, database operations, and lots of other processes.

9. \_\_\_\_\_\_ specializes in converting data from wide to long format.  
a) gcc  
b) reshape  
c) reshape2  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:reshape2 is used in conjunction with ggplot2 and plyr.

10.\_\_\_\_\_\_\_\_\_ is used to convert wide data to long data.  
a) melt  
b) dcast  
c) cast  
d) None of the mentioned  
View Answer

Answer:a  
Explanation:dcast is used to go from long to wide.

This set of tough R Programming Questions focuses on “Packages”.

1. \_\_\_\_\_\_ is used to view all packages installed.  
a) library()  
b) search()  
c) .libPaths()  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:Both require() and library() can load (strictly speaking, attach) an R package.

2. \_\_\_\_\_\_ is used to get library location in R.  
a) library()  
b) search()  
c) .libPaths()  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:libPaths() can add new paths to set of library trees searched.

3. \_\_\_\_\_\_\_\_ is used to view packages currently loaded.  
a) library()  
b) search()  
c) .libPaths()  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:This search will allow you to search the contents of the R functions, package vignettes, and task views.

4. \_\_\_\_\_\_\_\_ contains tools for Approximate Bayesian Computation (ABC).  
a) str  
b) abc  
c) zyz  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:The package implements several ABC algorithms for performing parameter estimation and model selection.

5. Which of the following package combine multi-dimensional arrays ?  
a) stringr  
b) comb  
c) abind  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:This is a generalization of cbind and rbind.

6. Which of the following contains functions for processing uniaxial minute-to-minute accelerometer data ?  
a) accelerometry  
b) abc  
c) accrued  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:This package contains a collection of functions that perform operations on time-series accelerometer data, such as identify non-wear time, flag minutes that are part of an activity bout, and find the maximum 10-minute average count value.

7. \_\_\_\_\_\_\_\_\_\_ is used for selecting regression transformations  
a) gac()  
b) gpl()  
c) avas()  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:ace() and avas() both are used for selecting regression transformations.

8. Which of the following is an R package for the exploratory analysis of genetic and genomic data ?  
a) adeg  
b) adegenet  
c) anc  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:This package contains Classes and functions for genetic data analysis within the multivariate framework.

9. \_\_\_\_\_\_ specializes in functions for analytical Customer Relationship Management.  
a) adagio  
b) ada  
c) aCRM  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:Convenience functions for data preparation and modeling are often used in aCRM.

10.\_\_\_\_\_\_\_\_\_ searches for significant clusters in genetic data.  
a) BayesCount  
b) BayesComm  
c) bayesclust  
d) None of the mentioned  
View Answer

Answer:c  
Explanation:BayesCount is used for power calculations and Bayesian analysis of count distributions and FECRT data using MCMC.

1. \_\_\_\_\_\_ Uses Grieg-Smith method on 2 dimensional spatial data  
a) G.S.  
b) g.data  
c) G1DBN  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:G1DBN is a package performing Dynamic Bayesian Network inference.

2. \_\_\_\_\_\_ finds K best paths in a given graph.  
a) kBestShortestPaths  
b) kcirt  
c) ktrees  
d) All of the mentioned  
View Answer

Answer:a  
Explanation:This package provides some routines to conduct the K-adaptive partitioning (kaps) and recursive partitioning (lrtree) for survival data.

3. \_\_\_\_\_\_\_\_ is a package for parsing, applying, and manipulating data cleaning rules  
a) EDR  
b) editrules  
c) edrGraphicalTools  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:edrGraphicalTools provides tools for dimension reduction methods.

4. \_\_\_\_\_\_\_\_ performs class prediction based on microarray data and clinical parameters  
a) M3  
b) M2  
c) MAclinical  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:M3 is used for reading M3 files.

5. Which of the following package provide namespace management functions not yet present in base R ?  
a) stringr  
b) namespace  
c) nbpMatching  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:nbpMatching contains functions for non-bipartite optimal matching.

6. Which of the following is used to analyze paleontological time-series ?  
a) accelerometry  
b) parfossil  
c) paleoTS  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:This package contains parfossil parallelized functions for palaeoecological and palaeogeographical analysis.

7. \_\_\_\_\_\_\_\_\_\_ is used for the analysis of air pollution data.  
a) air  
b) openair  
c) opena  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:Data are typically hourly time series and both monitoring data and dispersion model output can be analysed.

8. Which of the following package contains functions for reading and displaying satellite data for oceanographic applications with R ?  
a) saves  
b) satin  
c) saws  
d) All of the mentioned  
View Answer

Answer:b  
Explanation:saves is used for faster loading of variables.

9. \_\_\_\_\_\_ is used for Visualisation, verification and calibration of ternary probabilistic forecasts.  
a) TOSS  
b) termstrc  
c) ternvis  
d) All of the mentioned  
View Answer

Answer:c  
Explanation:TESS is used for faster simulation of reconstructed phylogenetic trees under time-dependent birth-death processes.

10.\_\_\_\_\_\_\_\_\_ uniforms and customizes plots of packages ggplot2, graphics and lattice.  
a) uniCox  
b) uniPlot  
c) unknownR  
d) None of the mentioned  
View Answer

Answer:b  
Explanation:uniPlot() allows to change parameters of the packages graphics, lattice and ggplot2 and to make these changes persistent over one R session.