

MED264 - Intro to R

Total Questions: 14

Most Correct Answers: #13

Least Correct Answers: #14

1. Consider the following R code (the numbers are the line numbers and not part of the code):

```
1 mass <- 47.5
2 age <- 122
3 mass <- mass * 2.3
4 age <- age - 20
```

What is *mass* at line 1?

- 0/14 ☐ A 122
- 0/14 ☐ B 0
- 0/14 ☐ C Not defined
- 13/14 ☒ D 47.5

2. Consider the following R code has been run (the numbers are the line numbers and not part of the code):

```
1 mass <- 47.5
2 age <- 122
3 mass <- mass * 2.3
4 age <- age - 20
```

What is the *mass* at line 3?

- 1/14 ☐ A 47.5
- 0/14 ☐ B 122
- 12/14 ☒ C 109.25
- 0/14 ☐ D 366

3. Consider the following R code has been run (the numbers are the line numbers and not part of the code):

```
1 mass <- 47.5
2 age <- 122
3 mass <- mass * 2.3
4 age <- age - 20
```

What is the value of *age* on line 4?

- 0/14 ☐ A 122
- 0/14 ☐ B 89.24
- 13/14 ☒ C 102
- 0/14 ☐ D 27.5

4. Consider the following R code has been run (the numbers are the line numbers and not part of the code):

```
1 mass <- 47.5
2 age <- 122
3 mass <- mass * 2.3
4 age <- age - 20
5 mass == age
```

What is the output of line #5 in R?

1/14 ☐ A True

12/14 ☒ B False

5. You have a cluttered R environment, what is the command for removing all objects in your current R session:

2/14 ☐ A rm(ls())

0/14 ☐ B rm(mass)

11/14 ☒ C rm(list=ls())

0/14 ☐ D %reset

6. What following command installs the following packages: ggplot2, plyr, gapminder

0/14 ☐ A library('ggplot2', 'dplyr', 'gapminder')

0/14 ☐ B installed.packages()

13/14 ☒ C install.packages('ggplot2', 'dplyr', 'gapminder')

0/14 ☐ D update.packages()

7. You've just received a data file in a CSV format from your data warehouse group. You need to read this file into R as a data frame named 'data'. It has all but one numeric columns and that column is named 'charvector'. You want to represent the character values in charvector as a character vector and not a factor. Which of the following will NOT accomplish this in R.

1/14 ☐ A data <- read.csv('/user/me/datawarehouse-25.csv', StringsAsFactors = FALSE)

3/14 ☐ B data <- read.table('/usr/me/datawarehouse-25.csv', StringsAsFactors = FALSE)

9/14 ☒ C data <- read.csv('/usr/me/datawarehouse-25.csv', header=TRUE)

8. Consider the following data frame df created by running:

```
> df <- data.frame(n=seq(3,11,2), s=5:1, b=LETTERS[1:5])
```

```
n s b
1 3 5 A
2 5 4 B
3 7 3 C
4 9 2 D
5 11 1 E
```

If I execute the following command in R, what will result?

```
> mynewdf <- df[df$n <= 7, ]
```

- 0/14 ☐ A mynewdf will contain a copy of df
- 11/14 ☒ B mynewdf will contain a copy of the df data frame including only rows where n is less than or equal to 7
- 0/14 ☐ C mynewdf will contain a copy of the df data frame including only rows where n is less than to 7
- 2/14 ☐ D mynewdf will be a vector of numbers less then 7

9. In R, the following are all atomic data types EXCEPT:

- 1/14 ☐ A complex
- 0/14 ☐ B numeric
- 0/14 ☐ C character
- 12/14 ☒ D table

10. Supposed I have a vector x <- c(1, 3, 7, 6, 1, 10, 15) and I want to set all elements less than 6 to 0. What R code below achieves this?

- 0/14 ☐ A x[x==0] <- 0
- 1/14 ☐ B x[x<=6] <- 0
- 11/14 ☒ C x[x<6] <- 0
- 1/14 ☐ D x[x>0] <- 6

11. I've read in the gapminder data as a data frame and used the str() function to inspect it.

```
> data <- read.csv('https://raw.githubusercontent.com/resbaz/r-novice-gapminder-files/master/data/gapminder-FiveYearData.csv')
```

```
str(data)
'data.frame': 1704 obs. of 6 variables:
 $ country : Factor w/ 142 levels "Afghanistan",...: 1 1 1 1 1 1 1 1 1 1 ...
 $ year : int 1952 1957 1962 1967 1972 1977 1982 1987 1992 1997 ...
 $ pop : num 8425333 9240934 10267083 11537966 13079460 ...
 $ continent: Factor w/ 5 levels "Africa","Americas",...: 3 3 3 3 3 3 3 3 3 3 ...
 $ lifeExp : num 28.8 30.3 32 34 36.1 ...
 $ gdpPercap: num 779 821 853 836 740 ...
```

What is the class of this object?

- 0/14 ☐ A vector
- 0/14 ☐ B factor
- 13/14 ☒ C data.frame

12. I've read in the gapminder data as a data frame and used the str() function to inspect it.

```
> data <- read.csv('https://raw.githubusercontent.com/resbaz/r-novice-gapminder-files/master/data/gapminder-FiveYearData.csv')
```

```
str(data)
```

```
'data.frame': 1704 obs. of 6 variables:
```

```
$ country : Factor w/ 142 levels "Afghanistan",...: 1 1 1 1 1 1 1 1 1 1 ...
```

```
$ year : int 1952 1957 1962 1967 1972 1977 1982 1987 1992 1997 ...
```

```
$ pop : num 8425333 9240934 10267083 11537966 13079460 ...
```

```
$ continent: Factor w/ 5 levels "Africa","Americas",...: 3 3 3 3 3 3 3 3 3 3 ...
```

```
$ lifeExp : num 28.8 30.3 32 34 36.1 ...
```

```
$ gdpPercap: num 779 821 853 836 740 ...
```

How many distinct countries are recorded in this data frame?

- 0/14 ☐ A 1704
- 0/14 ☐ B 6
- 13/14 ☒ C 142
- 0/14 ☐ D 1703

13. If I run the expression `x <- 4.5` in R, what is the class of `x` (hint: run `class(x)` in R)?

- 0/14 ☐ A character
- 0/14 ☐ B integer
- 13/14 ☒ C numeric
- 0/14 ☐ D complex

14. In R, what commands below would return help on the `paste()` function?

- 0/14 ☐ A `ask(paste)`
- 0/14 ☐ B `!paste`
- 12/14 ☒ C `?paste`
- 0/14 ☐ D `find(paste`
- 5/14 ☒ E `help(paste)`