

Q1) Attempt the following

[40marks]

- we place _____ brackets after all functions always.
 - Round
 - Curly
 - Square
 - Angular
- R shortcuts _____ brings back last command you typed
 - Up Arrow
 - Down Arrow
 - Ctrl + U
 - Ctrl + C
- A _____ is a multidimensional collection of data entries of the same type
 - vector
 - matrix
 - list
 - Data frame
- Function _____ diverts the output from the console to an external file
 - scan()
 - print()
 - write()
 - sink()
- `x <- 9; if (x > 0) sqrt(x) else sqrt(-x)`
What will be the output?
 - 3
 - 9
 - 3
 - 0
- `grep ("A", LETTERS, value = TRUE)`
What will be the output?
 - 1
 - 0
 - NA
 - "A"
- Use _____ to start comments.
 - \$\$
 - <-
 - ##
 - <!
- `length(colors())` What will be the output?
 - 365
 - 657
 - 255
 - 3
- Which of the following is not Low-level plotting function?
 - points()
 - lines()
 - abline()
 - par()

10. Which of the following functions is used for Tab-separated values File format()?
a. read_tsv() b. read_csv()
c. read_delim() d. read_table()
11. parse_date(c("75/02/05"), format = "%y/%m/%d") What will be the output?
a. 75-02-05 b. 1975-02-05
c. 05/02/75 d. 02/05/75
12. We can use _____ to create a data frame, specify the columns as named arguments
a. table() b. tibble()
c. tib() d. bubble()
13. The function _____ can merge several columns into to a key and a value column.
a. spread() b. tribble()
c. gather() d. extract()
14. The pipe operator is implemented in the _____ package
a. magrittr b. readr
c. stringr d. forcats
15. str_to_title("r program") What will be the output?
a. R Program b. r program
c. r Program d. R PROGRAM
16. If you have two factors, then you can concatenate them using _____
a. fct_collapse b. fct_recode
c. fct_lump d. fct_c()
17. While select () extracts a subset of columns, the _____ function does the same for rows
a. filter() b. tribble()
c. gather() d. extract()
18. The _____ function lets us add columns to a data frame based on expressions.
a. spread() b. mutate()
c. gather() d. extract()
19. With _____ you should write your data in a format that puts the year first, the month second, and the day last.
a. ymd() b. mdy()
c. ydm() d. dym()

20. The ____ package is essential for working with dates and fits well with the Tidyverse.
- lubridate
 - readr
 - stringr
 - forcats

Q.2 Attempt the following.

A) Solve any ONE.

4 Marks

- Write a note on Comparison and Logical operator with suitable examples.
- Explain below R objects with Examples:
 - Vector
 - Matrix
 - List
 - data.frame

B) Solve any ONE.

3 Marks

- How to Interrupt and Quit R on a different platform?
- List different brackets used in R. Specify use of it with suitable examples.

Q.3 Attempt the following.

A) Solve any ONE.

4 Marks

- Explain Any two Conditional statements with suitable examples.
- Explain the arguments used in plot().

B) Solve any ONE.

3 Marks

- Write a short note on: apply, tapply, lapply and sapply
- Write a while loop printing the cube of 1 to 5 with expected output.

Q.4 Attempt the following.

A) Solve any ONE.

4 Marks

- Write a short note on "Advanced plotting using Trellis; ggplots2, Lattice"
- Explain "Simple use of xyplot" with suitable examples.

B) Solve any ONE.

3 Marks

- Explain any three functions used for reading tabular data from readr package
- Create following Tibble using the tibble() function:

```
# A tibble: 5 x 3
  x     y     z
<int> <dbl> <dbl>
1     6    36   216
2     7    49   343
3     8    64   512
4     9    81   729
5    10   100  1000
```

Q.5 Attempt the following.

A) Solve any ONE.

4 Marks

1. Write down output of following:

```
str <- c("Give me an ice-cream", "Get yourself one ice-cream or two candy")
```

```
str_count(str, boundary("word"))
```

```
str_locate(str, "ice-cream")
```

```
s1 <- str_replace(str, "ice-cream", "cake"); s1
```

```
s="pizza"; s2<-str_glue("Give me a {s}"); s2
```

2. State difference between `as_factor()` and `as.factor()` with example. Also explain Concatenation with examples.

B) Solve any ONE.

3 Marks

1. Explain Wrapping, Padding, and Trimming used in stringr library.
2. Explain Expanding, Crossing, and Completing with Example.

Q.6 Attempt the following.

A) Solve any ONE.

4 Marks

1. State the use of the lubridate package and explain "Time points" with examples.
2. Write a short note on Joining Tables explaining its four functions.

B) Solve any ONE.

3 Marks

1. Explain `mutate()` with an example.
2. Write short note on Time Zone and Time Interval