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Question Paper Code: 58266

B.E. / B.Tech.DEGREE EXAMINATION, APRIL 2019

One credit course

Computer Science Engineering

15UCS866 - R PROGRAMMING

(Regulation 2015)

Duration: 1.30 hours

Maximum: 50 Marks

Answer ALL Questions

PART A - (20 x 1 = 20 Marks)

1. The R-help and _____ mailing lists have been highly active for over a decade now CO1- R
(a) R-mail (b) R-devel (c) R-dev (d) All of the mentioned
2. Which of the following is used for reading in saved workspaces ? CO1- R
(a) unserialize (b) load (c) get (d) None of the mentioned
3. Which of the following is used for generating sequences CO1 -R
(a) seq() (b) sequence() (c) order() (d) None of the mentioned
4. Point out the WRONG statement : CO1 -R
(a) Early versions of the S language contain functions for statistical modeling
(b) The book Programming with Data by John Chambers documents S version of the language
(c) In 1993 Bell Labs gave StatSci (later Insightful Corp.) an exclusive license to develop and sell the S language
(d) All of the mentioned
5. Numbers in R are generally treated as _____ precision real numbers CO1 -R
(a) single (b) double (c) real (d) All of the mentioned
6. debug() flags a function for _____ mode in R mode. CO1 -R

- (a) debug (b) run (c) compile (d) All of the mentioned
7. _____ makes it incredibly easy to fit time series models like ARIMA, ARMA, AR, Exponential Smoothing, etc. CO2 -R
- (a) sqldf (b) plyr (c) forecast (d) All of the mentioned
8. If commands are stored in an external file, say commands.R in the working directory work, they may be executed at any time in an R session with the command : CO2 -R
- (a) source("commands.R") (b) exec("commands.R")
(c) execute("commands.R") (d) All of the mentioned
9. If a command is not complete at the end of a line, R will give a different prompt, by default it is : CO2 -R
- (a) * (b) + (c) – (d) All of the mentioned
10. Elementary commands in R consist of either _____ or assignments. CO2 -R
- (a) utilstats (b) language (c) expressions (d) None of the mentioned
11. Bitmapped file formats can be most useful for CO2 -R
- (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 p
(d) Scatterplots with many many points
12. _____ text editor provides more general support mechanisms via ESS for working interactively with R. CO2- R
- (a) EAC (b) EAC (c) Shell (d) None of the above
13. Which of the following code constructs vector of length 11 ? CO2 -R
- (a) $> v <- 3*x + y + 1$ (b) $> v <- 3*x + y + 2$
(c) $> v <- 3*x + y + 2$ (d) All of the mentioned
14. The _____ function can be used to create vectors of objects by concatenating things together. CO2 -R
- (a) cp() (b) c() (c) concat() (d) None of the mentioned
15. The entities that R creates and manipulates are known as CO3-R

- (a) objects (b) task (c) container (d) All of the mentioned
16. Which of the following is an example of a vector graphics device in R? CO3- R
- (a) JPEG (b) PNG (c) GIF (d) SVG
17. Spread function is known as _____ in spreadsheets. CO3- R
- (a) pivot (b) unpivot (c) cast (d) order
18. _____ uniforms and customizes plots of packages ggplot2, graphics and lattice. CO3-R
- (a) uniCox (b) uniPlot (c) unknownR (d) None of the mentioned
19. Spread function is known as _____ in spreadsheets. CO3-R
- (a) pivot (b) unpivot (c) cast (d) order
20. _____ is used for translating between qplot and base graphics. CO3-R
- (a) translate_qplot_base (b) translate_qplot_gpl
- (c) translate_qplot_lattice (d) translate_qplot_ggplot

PART – B (2 x 15= 30 Marks)

21. (a) (i) What is the value of f(2) for the following R code? CO2-App (5)
- ```

b <- 4
f <- function (a)
{
b <- 3
b^3 + g (a)
}
g <- function (a)
{
a*b
}

```
- (ii) What is R Programming? Describe the Steps for R Environment. CO1-U      (10)
- Or
- (b) How will you read data from files in R language? Explain. CO1 -U      (15)

22. (a) Describe Predictive Modeling Techniques. CO3-U (15)

Or

(b) (i) Write a program for Matrix Multiplication and Division. CO2-U (8)

(ii) What will be the output of  $\log(-5.8)$  when executed on R console? CO2-U (7)