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Name: Reg. No:

FOURTH SEMESTER B.Voc. DEGREE EXAMINATION, APRIL 2023

(B.Voc. – Information Technology)

CC18U SDC4 DS15 - DATASCIENCE WITH R AND PYTHON PROGRAMMING, EMBEDDED LINUX OS AND ANDROID PROGRAMMING

(2018 to 2020 Admissions – Supplementary/Improvement)

Time: 3 Hours

Maximum: 80 Marks

PART A

Answer *all* questions. Each question carries 1 mark.

1. The ______ function creates a regular sequence of values to form a vector.

2. ______ function is used to watch for all available packages in library.

- 3. Matrices can be created by row-binding with the help of the ______ function.
- 4. ______ file type of Linux hold lists of files rather than the actual data.

5. _____ command is used to viewing the files instead of opening the file.

- 6. Sort command is used to ______ the contents of files.
- 7. MTD stands for _____
- 8. The ______ file specifies the layout of your screen.
- 9. How many broadcast receivers are available in android?
- 10. apk extension stands for _____

$(10 \times 1 = 10 \text{ Marks})$

PART B

Answer any *eight* questions. Each question carries 2 marks.

- 11. How to access the last five entries of a data frame?
- 12. Define array slicing.
- 13. What is difference between lapply and sapply?
- 14. What are data frames in R?
- 15. What is kernel source repositories?
- 16. Explain the roll of a boot loader.
- 17. Define Round Robin Scheduling
- 18. What is sys command in Linux?
- 19. What is ADB in android?
- 20. What is the onStop () method invoked?
- 21. Define Explicit Intent.
- 22. What are the different storages available in android?

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PART C

Answer any *six* questions. Each question carries 4 marks.

- 23. Explain update using SQLite with an example.
- 24. Explain the types of menus that are available in the android SDK.
- 25. Describe three common use cases for using Intent.
- 26. Explain an Android manifest file with an example.
- 27. What are the three types of memory model in the Linux kernel?
- 28. Write a short note on System initialization.
- 29. Explain about the hierarchical indexing.
- 30. Write any six standard datatypes in Numpy.
- 31. Explain the grammers of the dplyr package in R.

(6 × 4 = 24 Marks)

PART D

Answer any *two* questions. Each question carries 15 marks.

- 32. What are the different computations performed on NumPy arrays?
- 33. Briefly explain the Android framework.
- 34. What are the tools for building Embedded Linux application?
- 35. What are the basic components of Linux? Draw the architecture of Linux system.

 $(2 \times 15 = 30 \text{ Marks})$
