

**22U478S**

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Name: .....

Reg. No: .....

**FOURTH SEMESTER B.Voc. DEGREE EXAMINATION APRIL 2024**

(B.Voc. – Information Technology)

**CC18U SDC4 DS15 – DATA SCIENCE WITH R AND PYTHON PROGRAMMING,  
EMBEDDED LINUX OS AND ANDROID PROGRAMMING.**

(2018 to 2020 Admissions – Supplementary)

Time: 3 Hours

Maximum: 80 Marks

**PART A**

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

1. Attributes of an object (if any) can be accessed using the \_\_\_\_\_ function.
2. A \_\_\_\_\_ is an R-object which can contain many different types of elements inside it.
3. What is the function to set column names for a matrix?
4. In Linux \_\_\_\_\_ command is used to concatenate the files.
5. \_\_\_\_\_ is the ultimate parent of all user space processes in a Linux system.
6. JFS stands for \_\_\_\_\_
7. In Linux \_\_\_\_\_ command is used to count the number of characters, words in a file.
8. \_\_\_\_\_ is called only once when database is created for the first time.
9. An activity can be thought of as corresponding to \_\_\_\_\_
10. \_\_\_\_\_ is a collection of views and other child views.

**(10 × 1 = 10 Marks)**

**PART B**

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

11. How to create a 2D array?
12. Define explicit coercion.
13. List all aggregate functions in Pandas.
14. Define functions in R.
15. What are the reasons for the growth of embedded Linux?
16. What is grep command?
17. What is Shortest Job First (SJF) policy?
18. What is a cross compiler tool chain?
19. What is an Adapter in android?
20. Describe Android application Architecture.
21. What are the key components in android architecture?

22. What are the type of flags to run an application in android?

**(8 × 2 = 16 Marks)**

### **PART C**

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

23. How the missing values are handled in Pandas?

24. Explain Array Concatenation and Splitting.

25. What are the different data objects in R?

26. Explain module utilities.

27. What is a tool chain? Explain.

28. Explain the architecture of a Linux system. Draw the architecture.

29. What is Toast notification?

30. Explain the difference between explicit intent and implicit intent.

31. Explain the structure of an android program.

**(6 × 4 = 24 Marks)**

### **PART D**

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

32. a) What are the different types of scheduling policies? Explain

b) What are the different types of commands used in shell script?

33. Explain Android Activity Life cycle with the help of the diagram.

34. Explain the brief notes on:

a) Native Android Controls

b) Text Controls

c) Button Controls

d) Checkbox & Radio Button Controls

35. a) Explain how to manage Data Frames with the dplyr package in R.

b) Explain about dates and times in R.

**(2 × 15 = 30 Marks)**

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