

Unique Paper Code : **62353505**
 Name of the Paper : **SEC-3 The Statistical Software: R**
 Name of the Course : **B.A. (Prog.)**
 Semester : **V**
 Duration : **2 Hours**
 Maximum Marks : **38**

Attempt any four questions. All questions carry equal marks.

1. Answer the following

If $x = c(5L, 6L)$, then `class(x)` will give _____.
 If $b = c(50,45,39,44,30,38,45,39,15,45)$, then `sort(b)` will sort the data in ascending order. (T/F)
 If $a = 9$, $b = 6$ then `print(a%%b)` will give _____.
 Write the R syntax to find $\sin(60^\circ)$.
 Write the R syntax to find $\log_5 15$.
 If $x = c(2,2,13)$, $y = c(2,0,4)$ then `print(x^y)` will give _____.
 If $a = c(TRUE, TRUE, FALSE)$, $b = c(FALSE, TRUE, FALSE)$ then `print(a&&b)` will give _____.
 The operator for matrix multiplication in R is _____.
 The plot function (`plot()`) when use to a factor data will produce _____.
 Summary function in R will provide us a total of _____ statistical standards.

2. Find the stem and leaf plot for $x = 12, 34, 65, 13, 23, 22.5, 15.5$ and also write it's output.

What is the difference between `table()` and `fable()` command
 Is it possible to find pie chart for $c = c(1, -4, 2, 3, 1)$? If yes, find it, otherwise state the reason.
 What the graph of Box-Whisker plot represents? Explain with diagram.
 Mention any 2 methods to check whether the given data is of class "data frame" or not.

3. The following is a data frame by the name "df"

| Sepal.Length | Sepal.Width | Petal.Length | Petal.Width | Species |
|--------------|-------------|--------------|-------------|------------|
| 5.1 | 3.5 | 1.4 | 0.2 | setosa |
| 4.9 | 3.1 | 1.5 | 0.1 | setosa |
| 5.6 | 2.7 | 4.2 | 1.3 | versicolor |
| 5.0 | 3.3 | 1.4 | 0.2 | setosa |
| 5.6 | 3.0 | 4.5 | 1.5 | versicolor |
| 5.7 | 2.6 | 3.5 | 1.0 | versicolor |
| 5.9 | 3.0 | 5.1 | 1.8 | virginica |
| 6.1 | 2.6 | 5.6 | 1.4 | virginica |
| 5.6 | 2.8 | 4.9 | 2.0 | virginica |

- i. How to see the structure of the df?
- ii. Write the code to plot the bar chart for the **Species**.
- iii. Write the code for pair plot of the numeric variables.

- iv. Write the code to compute the correlation co-efficient between **Sepal.Length** and **Sepal.Width**.
- v. Select the rows 2,5,7 and store in dfl.

4. Answer the following

Write the command to convert matrix into data frame and vice-versa.
 Differentiate between data frame and list.
 Difference between ls(), str() and ls.str() commands.
 Differentiate the purpose of qqnorm and qqplot.
 Explain the use of save and load command with example.

5. Consider the following table:

| Age | Rural Male | Rural Female | Urban Male | Urban Female |
|-------|------------|--------------|------------|--------------|
| 50-54 | 11.7 | 08.7 | 15.4 | 08.4 |
| 55-59 | 18.1 | 11.7 | 24.3 | 13.6 |
| 60-64 | NA | 20.0 | NA | 19.3 |
| 65-69 | 41.0 | 30.9 | 54.6 | 35.1 |
| 70-74 | 66.0 | 54.3 | 71.1 | 50.0 |

Write the R codes to store the above data in a data frame. Replace the NA's by the average of each column. Find the mean and standard deviation of each row and write command to make a pie chart and cleveland dot chart.

6. Study the following R codes

```
a = 1 : 12
b = -13 : -24
A = matrix(a, ncol = 4, byrow = T)
B = matrix(b, nrow = 3, byrow = F)
C = A+B
D = t(C)
E = A[2,4]+B[3,4]]
F = cbind(A,B)
```

From the above codes write the value of A, B, C, D, E and F.

A

(This Question Paper contains 2 printed pages)

Your Roll No.

आपका अनुक्रमांक.....

S. No of Question Paper

प्रश्न पत्र का क्रमांक.....

Unique Paper Code : 62323501

यूनिक पेपर कोड : 62323501

Name of the Course : B.A. (Prog.)

पाठ्यक्रम का नाम : बी. ए. (प्रोग्राम)

Title of Paper : Democratic Awareness Through Legal Literacy, SEC

Semester/Annual : V

सेमेस्टर / वार्षिक : V

Time: 3 Hours

समय: 3 घंटे

Maximum Marks: 75

पूर्णांक: 75

Note: Answers may be written either in English or Hindi but the same medium should be followed throughout the paper.

इस प्रश्नपत्र का उत्तर अंग्रेजी या हिंदी किसी एक भाषा में दीजिए लेकिन सभी उत्तरों का माध्यम एक ही होना चाहिए।

Attempt **Any Four** questions.

All questions carry equal marks.

किन्हीं चार प्रश्नों के उत्तर दीजिए।

सभी प्रश्नों के अंक समान हैं।

1. What are the challenges in access to the Criminal Justice System in India? Discuss.

भारत में आपराधिक न्याय-प्रणाली तक पहुंच की चुनौतियां क्या हैं? विवेचना कीजिए।

2. Examine the right to life and personal liberty ensured under Article 21 of the Constitution. How has Public Interest Litigation expanded the scope of this right? Explain.

संविधान के अनुच्छेद 21 में वर्णित जीवन और व्यक्तिगत स्वतंत्रता के अधिकार का परीक्षण कीजिए। जनहित याचिका ने किस प्रकार इस अधिकार को विस्तारित किया है? व्याख्या कीजिए।

3. Give a brief comparative account of Consumer Protection Act, 1986 and Consumer Protection Act, 2019. How far have these two Acts addressed the concerns of the uneducated and the poor consumers? Discuss.

उपभोक्ता संरक्षण अधिनियम, 1986 और उपभोक्ता संरक्षण अधिनियम, 2019 का संक्षिप्त तुलनात्मक विवरण दें। किस हद तक ये दोनों अधिनियम अशिक्षित और गरीब उपभोक्ताओं के सरोकारों को सम्बोधित कर सके हैं? विवेचना कीजिए।

4. How far do you think that the constitutional and legal provisions have succeeded in curbing atrocities against the Scheduled Castes and the Scheduled Tribes in India? Examine.

आप किस हद तक यह सोचते हैं कि संवैधानिक और कानूनी प्रावधान भारत में अनुसूचित जातियों और अनुसूचित जनजातियों के खिलाफ हो रहे अत्याचारों पर अंकुश लगाने में सफल रहे हैं? परीक्षण कीजिए।

5. Do you think that the process of globalisation has adversely impacted labour laws in India? Give arguments in support of your answer.

क्या आप यह मानते हैं कि वैश्वीकरण की प्रक्रिया ने भारत में श्रम कानूनों पर प्रतिकूल प्रभाव डाला है? अपने उत्तर के समर्थन में तर्क दीजिए।

6. What are the issues and challenges related to Cyber security in India? What are different legal measures to ensure security in the cyber space? Discuss.

भारत में साइबर सुरक्षा से संबंधित मुद्दे और चुनौतियाँ क्या हैं? साइबर सुरक्षा सुनिश्चित करने से सम्बंधित कौन-कौन से विधिक पहल किये गये हैं? विवेचना कीजिए।