**BANKURA UNIVERSITY**

**B. Sc. (HONOURS) SIXTH SEMESTER EXAMINATIONS, 2021**

**Subject: Computer Science** **Course ID: 61516**

**Course Title: Information Security**

**Full Marks: 25** **Time: 1 Hr. 15 Min.**

**The figures in the margin indicate full marks**

**Answer all the questions.**

**UNIT I**

**1. Answer *any five* of the following questions:** **(5×1=5)**

**a) What is Cryptography?**

**b) What is Cipher?**

**c) What is attack?**

**d) What is Steganography?**

**e) Define watermarking.**

**f) What is threat?**

**g) What is traffic padding?**

**h) Define block cipher.**

**UNIT II**

**2. Answer *any two* of the following questions:** **(2×5=10)**

**a) What is meant by IP spoofing? What is fishing?** **(3+2)**

**b) Write briefly the categories of attacks.**

**c) Explain the Feistel Cipher.**

**d) Explain the components of network security model.**

**UNIT III**

**3. Answer *any one* of the following questions:** **(1×10=10)**

a) What are the requirements of cryptographic hash function? Distinguish between diffusion and confusion. (6+4)

b) Describe HMAC algorithm. Comment on the security of HMAC. (7+3)

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**BANKURA UNIVERSITY**

**B. Sc. (HONOURS) SIXTH SEMESTER EXAMINATIONS, 2021**

**Subject: Computer Science** **Course ID: 61516**

**Course Title: Introduction to Data Science**

**Full Marks: 25** **Time: 1 Hr. 15 Min.**

**The figures in the margin indicate full marks**

**Answer all the questions.**

**UNIT I**

1. Answer *any five* of the following questions: (5×1=5)

a) What is selection bias?

b) Define SVM.

c) Define regression.

d) Define PCA.

e) What is R base package?

f) Which data object in R is used to store and process categorical data?

g) How do you get the name of current working directory in R?

h) How do you install a package in R?

**UNIT II**

2. Answer *any two* of the following questions: (2×5=10)

a) **What are the differences between supervised and unsupervised learning?**

b) **Differentiate between univariate, bivariate and multivariate analysis**

c) **What are the feature selection methods used to select the right variables?**

d) **What is the difference between frame and matrix in R?**

## UNIT III

**3. Answer *any one* of the following questions: (1×10=10)**

a) **What is the contrast between information outline and a lattice in R? How do we find RMSE and MSE in a linear regression model? What is implied by K-closest neighbor? (2+6+2)**

b) **How missing values and impossible values are represented in R language? Explain about data import in R language. (4+6)**

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