A

Reg. No. :

Question Paper Code: 95C06

B.E./B.Tech. DEGREE EXAMINATION, NOV 2023

Third Semester

Computer Science and Business Systems

21UCB306 - COMPUTATIONAL STATISTICS

(Regulations 2021)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Normal distribution is applied for _____.   CO1- U

    (a) Discrete random distribution   (b) Irregular random distribution

    (c) Continuous random distribution   (d) none of the above

2. The standard normal distribution the value of median is _____   CO1- U

    (b) 1   (c) 2   (b) 5   (c) 6

3. Is LDA supervised or unsupervised?   CO1- U

    (a) supervised   (b) unsupervised   (c) both (a) & (b)   (d) none of the above

4. Is scaling required for linear discriminant analysis?   CO1- U

    (a) scaling required   (b) scaling does not required

    (c) all of the above   (d) none of the above

5. There are _____ types of Supervised Learning algorithms used for   CO1- U
    classification in Machine Learning.

    (a) 2   (b) 3   (c) 4   (d) 5

6. _____is an important factor in predictive modeling.   CO1- U

    (a) Dimensionality Reduction   (b) feature selection

    (c) feature extraction   (d) None of these

7. Which keyword is used for function in Python language? CO1- U

    (a) Function   (b) Def.   (c) Fun   (d) Define

8. What will be the output of the following Python function? CO1- U

    min(max(False,-3,-4),2,7)

    (a) -4   (b) -3   (c) 2   (d) False

9. Each computer in a cluster is connected using _____ CO1- U

    (a) UTP   (b) Rj-45   (c) STP   (d) Coaxial cable

10. How many background process runs behind balanced cluster? CO1- U

    (a) 1   (b) 2   (c) 3   (d) all of the above

<div align="center">PART – B (5 x 2= 10 Marks)</div>

11. What is the formula for multivariate regression? CO1- U

12. Difference between regression analysis and discriminant analysis. CO1- U

13. How do you solve principal component analysis? CO3- Ana

14. What is tuple? Give example. CO1- U

15. List the applications of Clustering . CO1- U

<div align="center">PART – C (5 x 16= 80 Marks)</div>

16. (a) Calculate the Karl Pearson correlation coefficient(r)   CO2- App   (16)

X	10	6	9	10	12	13	11	9
Y	9	4	6	9	11	13	8	4

<div align="center">Or</div>

    (b) Find whether there is significant difference between variety of wheat   CO2- App   (16)
    &difference in Plot.Using ANOVA two way classification

Plots	A (Wheat)	B	C
P1	6	5	5
P2	7	5	4
P3	3	3	3
P4	8	7	4

17. (a) Which steps to analyze Linear Discriminant Analysis? What are   CO2- App   (16)
    applications of LOA?Explain briefly.

<div align="center">Or</div>

    (b) To solve Linear Discriminant function analysis   CO2- App   (16)
    C1->X1=(X1,X2)={(4,1),(2,4),(2,3),(3,6),(4,4)}
    C2->X2=(X1,X2)={(9,10),(6,8),(9,5),(8,7),(10,8)}

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18. (a) How do you analyze the Principal component Analysis? CO1- U (16)

Or

(b) How do you conduct Confirmatory factor analysis? CO1- U (16)

19. (a) Briefly explain about Data visualization in python. CO1- U (16)

Or

(b) How to Read from a file? Give some example. CO1- U (16)

20. (a) What are the different types of clustering? CO1- U (16)

Or

(b) Explain in detail about overlapping clustering? CO1- U (16)

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