B.Tech. sem-III C.S.B.S winter. 2019

B. TECH. (COMPUTER SCIENCE & BUSINESS SYSTEMS) (CBCS - 2018 COURSE) B.Tech. (CSBS) Sem - III: WINTER- 2019
SUBJECT: COMPUTATIONAL STATISTICS (UE)

Tuesday 26-11-2019
10:00 AM-01:00 PM

W-20448-2019
Max. Marks: 60

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if necessary.

Q.1 State and prove properties of multivariate normal distribution. **(10)**

OR

Q.1 What is H – plot? Describe with diagram. **(10)**

Q.2 Write the assumption of MANOVA. **(10)**

OR

Q.2 Explain linear discriminant functions? **(10)**

Q.3 Describe the factor analysis model. **(10)**

OR

Q.3 Discuss principle component analysis with example. **(10)**

Q.4 a) How interpreting clusters are formed using K – Means clustering. **(05)**

b) Illustrate correlation and distance. **(05)**

OR

Q.4 State various methods of clustering and explain one in detail. **(10)**

Q.5 a) How Python program is executed? **(05)**

b) What is dimension and shape of dataset? Explain how shape of dataset is changed? **(05)**

OR

Q.5 Write a Python code to create student management system using text file. **(10)**

Q.6 a) Consider student attendance dataset for five subjects (lecture, practical) write a code to visualize it in following manner. **(05)**

i) Subject wise attendance
ii) Students all subjects attendance
iii) Average attendance of each subjects.

b) Describe time series and data ranges. **(05)**

OR

Q.6 Consider any standard dataset and write a code to create pivot table and visualize it using bar chart, pi chart and scatter chart. **(10)**

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