Computer Lab - Practical Question Bank
FACULTY OF COMMERCE, OSMANIA UNIVERSITY

B.Com (Business Analytics) CBCS Semester - II w.e.f. 2020-21

DATA ANALYTICS ESSENTIALS - Paper: 203

Time: 60 Minutes

Record	: 10
Viva-voce	: 10
Skill Test	: 15
Total Marks	: 35

UNIT – I

VARIABLES FOR DATA ANALYTICS

1. Draw the diagram showing the types of Variables with examples.

2. Differentiate between Numerical and Categorical Variables.

3. What are Named variables? Using Ms-Excel, create a list of 10 named variables and add the numbers automatically.

4. What is a Ratio Variable? State the importance of Ratio Variable in Data Analytics.

5. Explain Data Table in Excel. Create a One Variable Data Table in Excel.

6. What is a two Variable Data Table? Write steps to create a Two Variable Data Table.

7. Write steps for analysing a Data Table with Multiple Formulas in Excel.

8. How do you Create, Rename, Recode and Merge Variables in R?

9. Write steps to create Your Name, Age, Class, and College Name in R.

10. Draw a Chart for R- Variables.

UNIT – II

11. Find the Average Price of given items using MS-Excel.

Rice Bag Ashirwad	1450
Rice Bag India Gate	1200
Sona's Sona Masurie	1300
Kohinoor Rice	1100
Aabida Basmati Rice	1400
Indian Valley	1250
Mannat Rice	1200
Shaalimaar Rice	1425

12. Using Ms-Excel, find the Median Value of the following items.

Items	Status	Amount Rs.
Banana	Delivered	758
Apple	Cancelled	258
Cherry	In-transit	587
Banana	Delivered	495
Banana	Cancelled	687
Apple	Delivered	258
Cherry	Delivered	684

13. Find the most frequently ordered Quantity from a supermarket store in MS-Excel.

Products	Quantity	MRP Rs.
Tang Orange Flavour	5	1050
Rasna Orange	6	1200
RoohAfza	5	1800
Tang Apple	10	1200
Rasna Green Apple	5	1700
Tang Cocktail	5	1400
Jaljeera	15	120

14. Find the Highest and Lowest Marks of Students obtained in English using Ms-Excel.

Himabindu	85
Karthik	15
Renuka	78
Mallika .S	15
Ashok Jaiswal	100
Billu Yadav	75
Girish J.	50
Sarika	05

15. Find the Geometric and Harmonic Mean Wages from the following data using Ms-Excel.

Job	Wages Rs.
Electrician	200
Nurse	500
Sales Manager	540
Manufacturing Engineer	540
Celebrity	450
Beautician	480
Data entry operator	350
Plumber	240

16. Using Ms-Excel, calculate Standard Deviation of total sales from the given data.

Total Sales (Rs.)	Branch
258000	Delhi
485220	Mumbai
875010	Kolkata
235461	Hyderabad
875212	Indore
785223	Surat
345621	Pune

17. Find Q1 and Q3 and also Quartile Deviation from the following information in Ms-Excel.

S.No.	Value
1	145
2	254
3	156
4	354
5	253
6	253
7	245
8	892
9	242
10	268

18. Find the Quartiles from the following data in Ms-Excel.

Height (in inches)	58	59	60	61	62	63	64	65	66
No. of Persons	2	3	6	15	10	5	4	3	1

19. Compare and find the Range of 10 Students' marks in Mathematics and Statistics using Ms-Excel.

Maths	25	40	30	35	21	45	23	33	10
Statistics	30	39	23	42	2	40	25	30	18

20. Calculate Variance from the following data in MS-Excel.

X: 10, 11, 17, 25, 7, 13, 21, 10, 12, 14

UNIT – III

21. Calculate the Mean and Standard Deviation of the Probability Distribution in Ms-Excel.
   Number of Persons (X) 2,3,4,5
   Probability (P(x)) 0.22; 0.48; 0.25; and 0.05

22. One ticket is drawn at random from a bag containing 30 tickets numbered from 1 to 30.
   Find the probability that it is a multiple of 5 or 7 using Ms-Excel.

23. In a class with 5 students, the medical check-up take place wherein they were weighed, the following data w captured. Calculate the variance of the data set based on the given information.

Students	Weight in Kgs (X)
1	30
2	33
3	39
4	29
5	34

24. Show VEN Diagrams by taking a master data from the college in a particular course.

25. Analyze "this" OR "that" and also "this" AND "that" diagram with the help of an example data.

26. The probability that A will live upto 60 years is ¾ and probability of B will live upto 60 years is 2/3. What is the probability that both A and B live upto 60 years. Show the calculation in Ms-Excel.

27. A husband and a wife appear in an interview for two vacancies in the same post. The probability of husband selection is 1/7 and that of wife is 1/5. What is the probability that only one of them will be selected? Show the steps in Ms-excel.

28. Calculate P using a Contingency Table for a master data.

29. Calculate Bayes' Theorem for a dummy data.

30. What is the probability that a boy will get a scholarship is 0.90 and a girl will get is 0.80. Write steps how you will calculate the probability that at least one of them get scholarship?

UNIT – IV

31. Analyse the types of Distributions.

32. A pair of fair dice is rolled. Let `X' denote the sum of the number of dots on the top faces. Construct the probability distribution of X for a pair of fair dice along with a histogram diagram in Ms Excel.

33. A coin is flipped 10 times. Calculate the probability of getting 5 heads using a Binomial Distribution formula using Ms-Excel.

34. Given information: Value for which we need distribution   52
                          Arithmetic mean of the distribution   50
                          Standard Deviation of the distribution   2.5

   Using Ms-Excel, calculate Normal Distribution and write steps.

35. The distribution of heights of Indian Women aged 18 to 24 is approximately normally distributed with a mean of 65.5 inches and a standard deviation of 2.5 inches. What percentage of these women is taller than 68 inches? Show the steps in Ms-Excel to calculate Normal Distribution using NORM.S.DIST function.

36. The golf scores for a school team were normally distributed with a mean of 68 and a standard deviation of 3. Find the probability that a golfer scored between 66 and 70 in Ms-Excel.

37. The number of complaints lodged against the robbery of the vehicles in a day was calculated for the next 10 days as given below. Calculate the quartile deviation and its coefficient for the given discrete distribution case in Ms-Excel.

Day	Frequency
1	20
2	35
3	25
4	12
5	10
6	23
7	18
8	14
9	30
10	40

38. Discuss the procedure to calculate Probability through Normal Distribution.

39. Compare Quartiles and Normal Distributions.

40. Make a note on Skewness and discuss the procedure to identify Positive Skew and Negative Skew.

UNIT – V

41. How you Apply Vectors? Use Data Frames in R. Also discuss the process to use data from an external file in R.

42. Discuss the procedure to apply Mean / Median / Standard Deviation in R-Distributions in R Case Study.

43. How do you use Normal Distribution Function and Poisson Distribution Function in R?

44. Write navigation to Apply Scatter Plot, Box Plot and Histogram in R.

45. Explain Fraud Detection Case Study.

46. What is Bayes' Theorem? How to Use Bayes' Theorem in R?

47. Assign a message "Hello" to a variable `X' and display it on the screen using R software.

48. Display numbers 1 to 30 in R.

49. Display any 5 cities names in R using objects.

50. Write a R program to create a data frame from two given Vectors like Names:

Aliya	Dany	Katherine	Sudha
23.4	13.5	19.2	54.2

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