

COURSE CODE : INT233
COURSE NAME : DATA VISUALIZATION

Read the following instructions carefully before attempting the question paper.

1. Attempt only the question allocated by neutral examiner out of all the given questions. If some other question is attempted by the candidate, it shall lead to cancellation of the examination.
2. Submit the question paper along with the answer sheet to the invigilator before leaving the examination hall/lab.
3. Fill all the details mentioned below very carefully in the space provided.

Registration No. : _____ Signature of student: _____

Question No. Allocated to candidate: _____
 (To be filled by Neutral Examiner)

It is certified that I have verified that the candidate has attempted the allocated question only.

Signature of Neutral Examiner: _____ Signature of Invigilator: _____

Name of Neutral Examiner: _____ Name of Invigilator: _____

UID: _____ UID: _____

Q1 Use "Employee Sample Data" and implement the following. Add title, caption, and color to each worksheet.

- a) Which ethnicity has the highest average annual salary? Find it using a pie chart.
- b) How many males and females are working in Human Resources department. Find it using stacked bar chart.
- c) Which country has the highest annual salary? Find it using satellite map.
- d) Create an interactive dashboard for the above three objectives.

Q2 Use "Employee Sample Data" and implement the following. Add title, caption, and color to each worksheet.

- a) Which business unit and department together has the lowest annual salary using bar chart.
- b) Find the maximum age for the Vice President job title using bar chart.
- c) How many employees are hired in the year 2005. Also find how many males and females are hired in the year 2005. Find this using a line chart.
- d) Create an interactive dashboard for the above three objectives.

Q3 Use "Sample Data" and implement the following. Add title, caption, and color to each worksheet.

- a) Which item in the central region has the lowest and the highest total using hierarchy.
- b) How many units have been sold by Gill Rep using waterfall chart.
- c) Find the unit cost of n items using parameter.
- d) Create an interactive dashboard for the above three objectives.

Q4 Use "World95" and implement the following. Add title, caption, and color to each worksheet.

- a) Find top 3 countries having highest number of cases of aids using parameter. Show it on the dark map.
- b) Create a set of Catholic and Muslim religion based on birth rate. Show this set using in/out with different colors for both.
- c) Find the birth rate and the death rate for Buddhist and Orthodox religion using scatter plot. Use different shapes for different religion from the shape card instead of default shapes.
- d) Create an interactive dashboard for the above three objectives.

Q5 Use "Employee Sample Data" and implement the following:

- a) Find the length of the full name.

- b) Find 3 letters from each job title starting from the 2nd position.
- c) Find the 4 left most and 4 right most characters both in different columns from each Business Unit.
- d) How many males and females are from Asian Ethnicity. Find this using table.

Q6 Use "international_matches" dataset and implement the following. Add title, caption, and color to each worksheet.

- a) Find the away team score for away team continent containing "I" using bubble chart.
- b) Find the away team score of the top 5 away teams from Africa continent.
- c) Find the away team score and away team fifa rank for top 10 away team using scatter plot. Use different shapes for different teams instead of default shapes.
- d) Create an interactive dashboard for the above three objectives.

Q7 Use "international_matches" and implement the following. Add title, caption, and color to each worksheet.

- a) Find the difference between the home team score and away team score. If the difference is in negative, then display home team score otherwise display away team score.
- b) Find the difference between the home team and away team score for the year 2008 using a line chart.
- c) Find how many matches are won and lost by Asia home team continent using table.
- d) Create an interactive dashboard for the above three objectives.

Q8 Use "IPL_Matches_2022" and implement the following. Add title, caption, and color to each worksheet.

- a) Find which are the top 3 combinations of team1 and umpire 1 based on margin using the bar chart. Show only top 3 in the visualization.
- b) How many IPL matches are won by Runs and by Wickets by Delhi capitals from Team 1.
- c) Name the players who become player of the match for Kolkata city.
- d) Create an interactive dashboard for the above three objectives.

Q9 Use "Spotify_Youtube" and implement the following. Add title, caption, and color to each worksheet.

- a) Find which album contributes to the highest percentage of likes and how much.
- b) How much is the acousticness provided by the single album type using funnel chart.
- c) Find which album and album type together got the comments greater than 50,00,000.
- d) Create an interactive dashboard for the above three objectives.

Q10 Use "Amazon Sale Report" and implement the following. Add title, caption, and color to each worksheet.

- a) Find which categories contribute to the top 80% of the amount using the pareto chart.
- b) Find the sum of amount for Kurta category using tree map. Also use different colors to represent different categories.
- c) Find how many quantities have XXL size using bubble chart.
- d) Create an interactive dashboard for the above three objectives.

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