

# NCERT SOLUTIONS

CLASS - 12th



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Class : 12th

Subject : Geography

Chapter : 3

Chapter Name : Graphical representation of data.

Q1 Choose the right answer from the four alternatives given below :

(i) Which one of the following map shows the population distribution:

(a) Choropleth maps

(b) Isopleth maps

(c) Dot maps

(d) Square root maps

(ii) Which one of the following is best suited to represent the decadal growth of population?

(a) Line graph

(b) Bar diagram

(c) Circle diagram

(d) Flow diagram

(iii) Polygraph is constructed to represent:

(a) Only one variable

(b) Two variables only

(c) More than two variables

(d) None of the above

(iv) Which one of the following maps is known as “Dynamic Map”?

- (a) Dot map
- (b) Choropleth
- (c) Isopleth
- (d) Flow map

Answer.

- i) (c) Dot maps
- ii) (a) Line graph
- iii) (c) More than two variables
- iv) (d) Flow map

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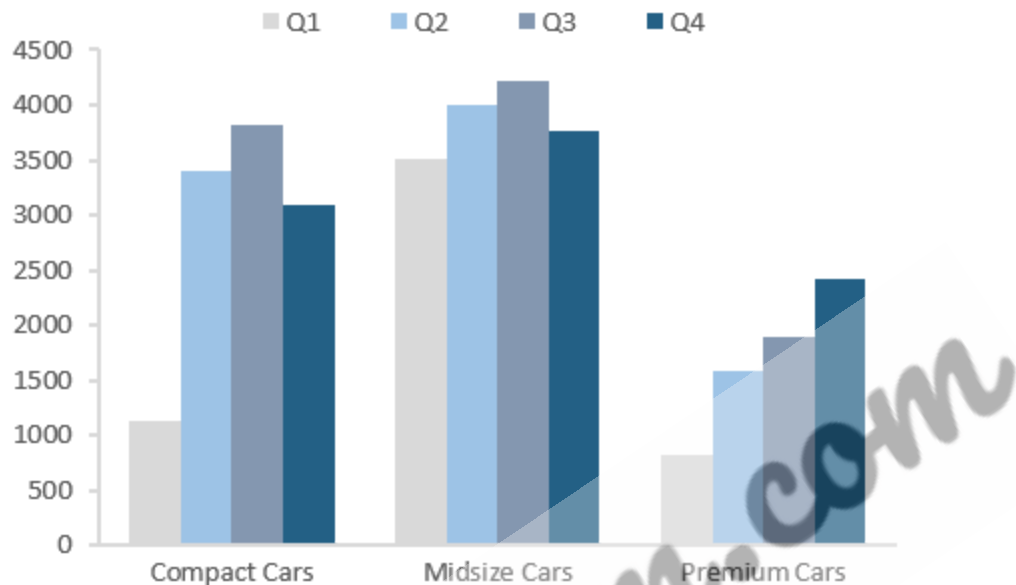
Q2 Answer the following questions in about 30 words :

- (i) What is a thematic map?
- (ii) Differentiate between multiple bar diagram and compound bar diagram.
- (iii) What are the requirements to construct a dot map?
- (iv) Describe the method of constructing a traffic flow map.
- (v) What is an isopleth map? How is an interpolation carried out?
- (vi) Describe and illustrate the steps to be followed in preparing a choropleth map.
- (vii) Discuss important steps to represent data with the help of a pie-diagram.

Answer.

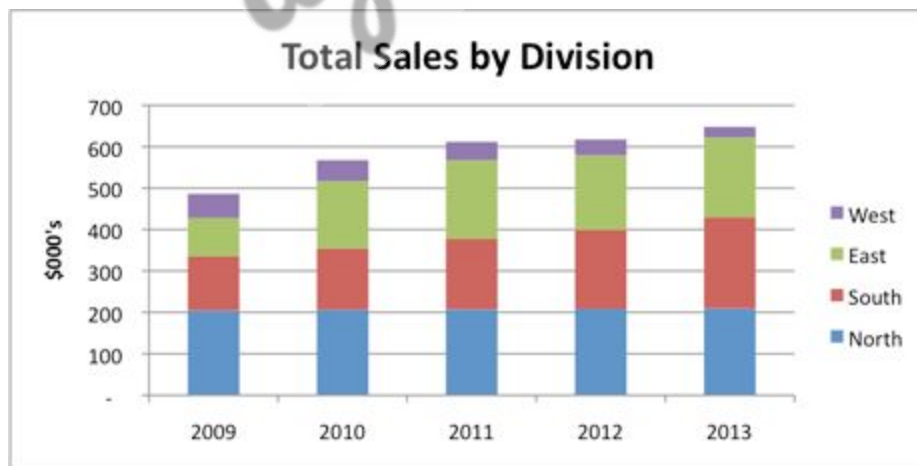
(i) A thematic map as the name suggests has an underlying theme or subject which it explains like regional distributions or rainfall distribution, agriculture distribution etc.

(ii) Multiple bar diagrams represent two or more data sets to facilitate comparison eg. Volume of sale of cars Compact, Midsize and Premium through the four quarters.



Compound bar diagrams also represent comparisons of two or more sets by combining them into one column of single rectangular bar.

Eg.



(iii) A dot map is the map which uses points and dots to show presence and density of phenomenon in a region.

Requirements for a dot map

(a) An administrative map of the given area and regions required to be mapped like respective state/district/block boundaries.

(b) Statistical data of the chosen characteristic in the particular administrative units, i.e. population, crops, etc.

(c) Selection of a scale to determine the value of a dot.

(d) Physiographic map of the region, especially relief ,typography , climatic conditions etc.

Eg.



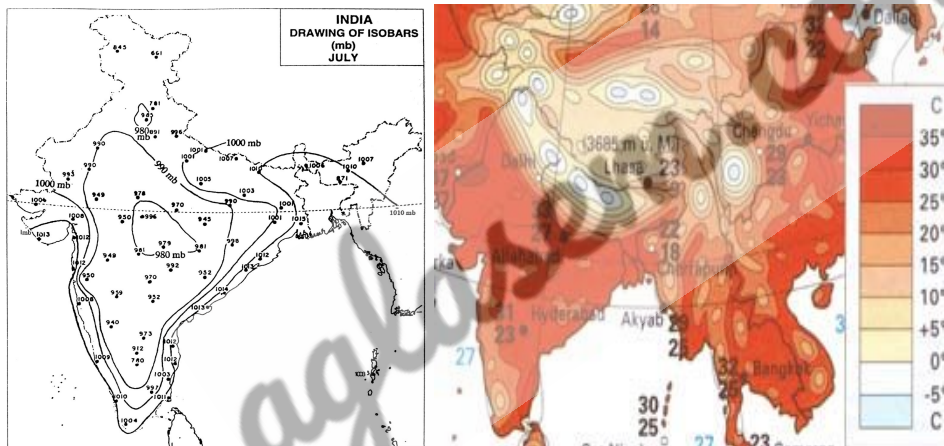
(iv)

Flow map shows the flow of variable under question eg passengers ,vehicle etc.

Method of constructing traffic flow map are as follows:

- (a) A route map depicting the desired transport routes along which traffic needs to be administered.
- (b) The data pertaining to the flow of signals, number of vehicles, etc.along with the point of origin and destination of these movements.
- (c) The selection of a scale.
- (v) Isopleth map uses contouring and coloring to show areas with similar degree of an aspect. Eg Areas of same elevation, precipitation and temperature. It is used for a continuous distribution. It can also use lines to connect similar regions.

Graphically,



Interpolation is used to insert intermediate values between the observed values. Generally, drawing of isopleths include joining the places of same value. This is called interpolation.

Steps are as follows:

- (a) The minimum and maximum values given on the map need to be determined and Range = maximum value – minimum value is calculated
- (b) Based on range, interval like 5, 10, 15, etc. is determined.
- (c) The exact point of drawing an Isopleth is determined:

The interval is the difference between the actual value on the map and interpolated value.

For example, an Isotherm map of two places show 28 Celcius and 33 Celsius and you want to draw 30 Celsius isotherm, the distance between the two points is measured. Suppose, the distance is 1cm or 10 mm and the difference between 28 and 33 is 5, whereas, 30 is 2 points away from 28 and 3 points behind 33, thus, exact point of 30 will be. Thus, isotherm of 30 degrees will be plotted 4mm away from 28 degree or 6mm ahead of 33 degrees

(vi) Choropleth maps represent data thematic data of predetermined geographic areas with particular population density or per capita income and its distribution over administrative units.

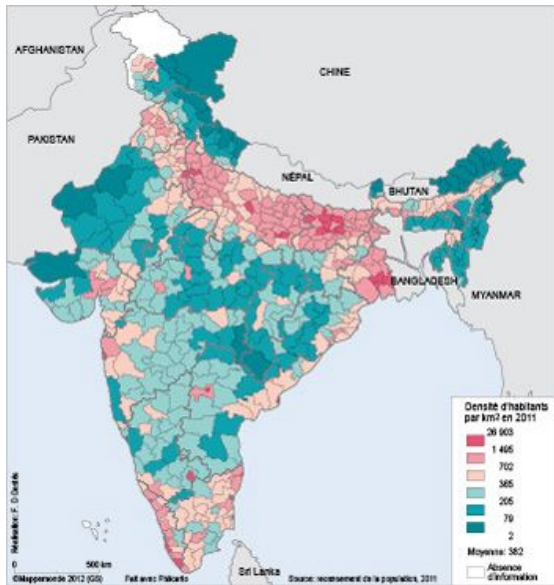
Requirement for drawing Choropleth Map

- (a) A map of the area depicting different administrative units.
- (b) Appropriate statistical data according to administrative units.

Steps to be followed

- (a) Arrange the data in ascending or descending order.
- (b) Group the data into 5 categories to represent very high, high, medium, low and very low concentrations.
- (c) The interval between the categories may be identified on the following formulae i.e.,  $\text{Range}/5$  and  $\text{Range} = \text{maximum value} - \text{minimum value}$ .
- (d) Patterns, shades or colour to be used to depict the chosen categories should be marked in an increasing or decreasing order

Eg.



(vii) Pie Chart is a form of circular representation of data showing proportion of each variable slice wise.

**Construction**

- (a) Select a suitable radius for the circle. The circle should neither be too big nor too small.
  - (b) Draw a line from the centre of the circle to one point of arc (radius).
  - (c) Measure the angles from the arc of the circle for each category in an ascending order clockwise, starting with smaller angle.
  - (d) Complete the diagram by adding the title, sub-title, and the legend.
- The legend mark be chosen for each variable/category and highlighted by distinct shades/colours.

