S.S. COLLEGE; Jehanabad **Class- B.A. Part- I**
Department- Geography **Faculty- Dr. Sneha Swarup**

Topic- Cylindrical Equal Area Projection

(Paper- Geography Practical)

Introduction-

The cylindrical equal area projection, also known as the *Lambert's projection*, has been derived by projecting the surface of the globe with parallel rays on a cylinder touching it at the equator. Both the parallels and meridians are projected as straight lines intersecting one another at right angles. The pole is shown with a parallel equal to the equator; hence, the shape of the area gets highly distorted at the higher latitude

Example

Construct a cylindrical equal area projection for the world when the R.F. of the map is 1:300,000,000 taking latitudinal and longitudinal interval as 15º.

Radius of the reduced earth $R = \frac{640,000,000}{300,000,000} = 2.1$ cm

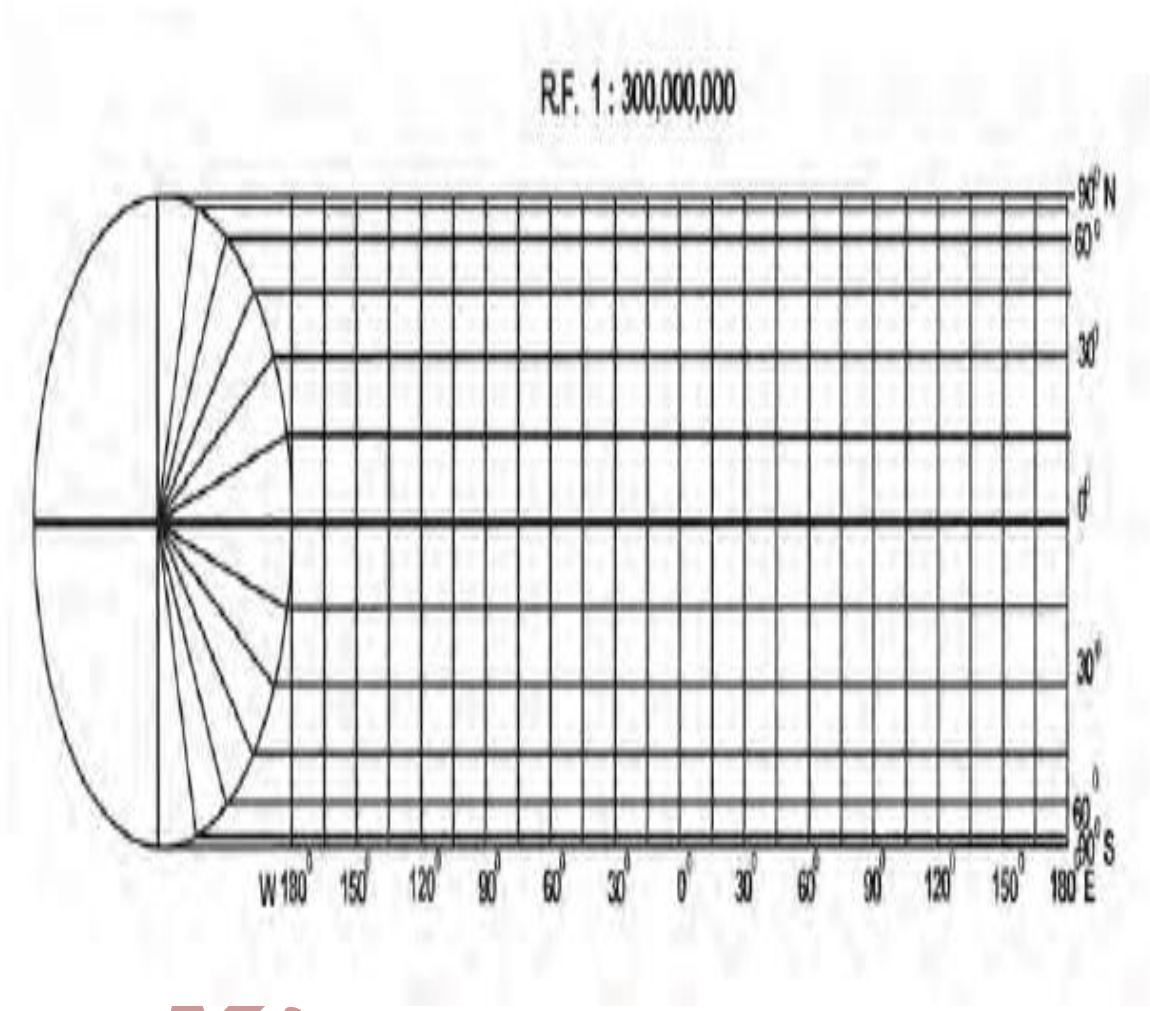
Length of the equator $2\eth R$ or $\frac{2x22x2.1}{7} = 13.2cm$

Interval along the equator = $\frac{13.2x15^{o}}{360^{o}} = 0.55cm$

Construction of Cylindrical Equal Area Projection

- Draw a circle of 2.1 cm radius; Mark the angles of 15º, 30º, 45º, 60º, 75º and 90º for both, northern and southern hemispheres;
- Draw a line of 13.2 cm and divide it into 24 equal parts at a distance of 0.55cm apart. This line represents the equator;

- Draw a line perpendicular to the equator at the point where 0° is meeting the circumference of the circle;
- Extend all the parallels equal to the length of the equator from the perpendicular line;



PROPERTIES OF CYLINDRICAL EQUAL AREA PROJECTIONS:

1. All parallels and meridians are straight lines intersecting each other at right angle.

2. Polar parallel is also equal to the equator.

3. Scale is true only along the equator.

Limitations

1. Distortion increases as we move towards the pole.

2. The projection is non-orthomorphic.

3. Equality of area is maintained at the cost of distortion in shape.

Uses

1. The projection is most suitable for the area lying between 45o N and S latitudes.

2. It is suitable to show the distribution of tropical crops like rice,tea, coffee, rubber and sugarcane.