

turing and tertiary sector and thus it helps in the transformation of rural settlement to an urban agglomeration.

**Hierarchy of Rural Settlements : Christaller's Theory of Central Places**—The theory was first given by W. Christaller in 1933. His theory was largely based on a study of central places in Southern Germany.

A central place is defined as a settlement serving as a focal point for a number of other settlements which are dependent on it for some services on a regular lasting basis with daily periodicity.

Christaller proposed that settlement with the lowest order of specialisation would be equally spaced and surrounded by hexagonal shaped service areas or hinterlands. For every six of these lower order settlements, he suggested that there would be a larger and more specialised settlement which in turn would be situated at an equal distance from the other settlements of the same order and would also be surrounded by a hexagonal service area. Progressively, more specialised towns with even larger hexagonal shaped hinterlands would be similarly located at an equal distance from each other. According to Christaller, the smallest centres would lie approximately 7 km. apart. Centres of next order were thought to serve three times the area and three times the population. Thus they would be located  $(\sqrt{3} \times 7)$  km or 12 km apart.

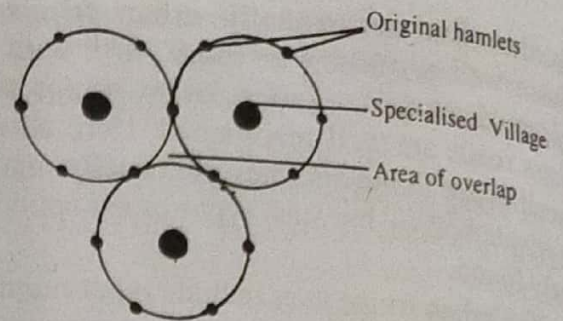
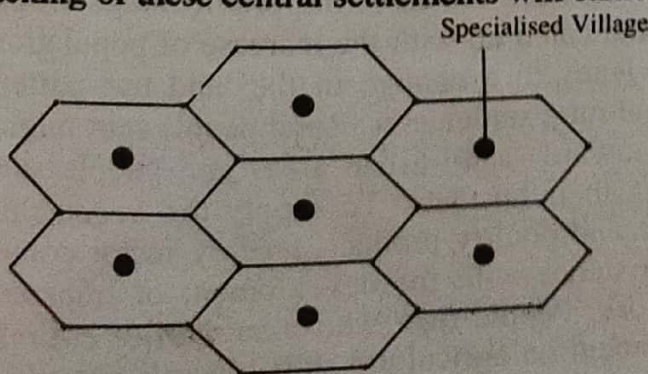
Similarly, the next series of hinterlands would be three times larger than those of the preceding order.

**Some Proposition of Christaller's Theory—**

(i) Area should be isotropic *i.e.*, uniformity of terrain, resources, climate, distribution of population and income levels.

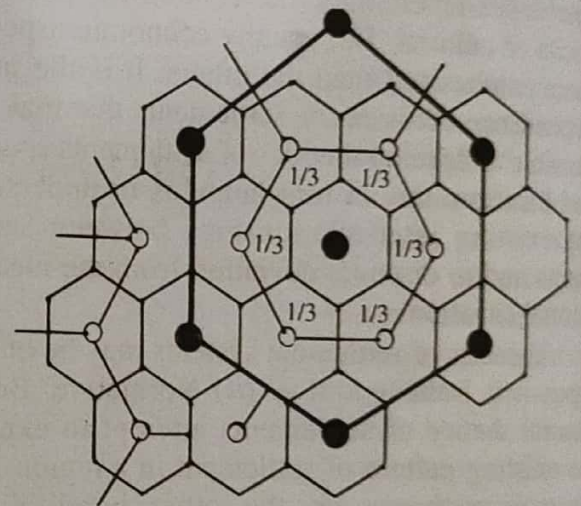
(ii) With the advancement of technology and better communication, some of these hamlets will serve the surrounding hamlets.

(iii) For the sake of efficiency, a hexagonal packing of these central settlements will come up.



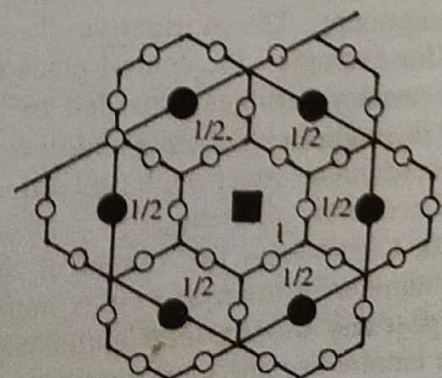
According to Christaller efficiency will demand minimisation of the number of hierarchical levels which will depend, partly, on enmeshing and nesting of different levels of settlements. These can be based on three criteria :

(1) **Marketing Principal**—Here it will be seen that a higher order central place serves one-third population of each of six surrounding settlements or three times its own area and population. This is also called  $K = 3$  hierarchy since it serves,



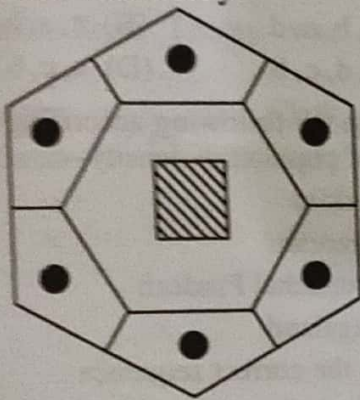
$\frac{1}{3}$  (6 settlement) + 1 = 3 times its own population and area.

(2) **Transportation Principle**—The transportation efficiency will demand minimisation of road lengths linking the central places at all hierarchical level and the location of all lower order central places, along these roads. It is also



called  $K = 4$  hierarchy because it serves  $\frac{1}{2}$  (6 settlements) + 1 = 4 times the population and area of a lower order centre.

(3) **Administrative Principle**—The administrative efficiency and necessity will demand that complementary area boundary of a lower order centre lies entirely within the complementary area boundary of a higher order centre. For ex. all district boundaries lie within the state boundary. It is also called  $K = 7$  hierarchy.



### Criticism of Christaller's Theory—

(i) An isotropic surface as proposed by Christaller is very rare.

(ii) This theory is suitable for agricultural regions here industrial and other factors are completely ignored.

(iii) One cannot fix the value of  $K$  as proposed by Christaller, it is very poor approximation.

### August Losch's Theory of Market Centres

—In 1940 the economist A. Losch presented an important modification of Christaller's model. Like Christaller he again used hexagonal service areas, but allowed various hexagonal systems to co-exist. In Losch's model the various hexagonal systems,  $K = 3$ ,  $K = 4$ ,  $K = 7$  and others, operate at different levels and are superimposed on each other. The application of a variable  $K$  value produces a continuum of settlement size more closely and live with the theoretical result of the rank-size rule.